**MISSION-CRITICAL MAC TRICKS + FREE BOOK! 65 GREAT MAC TIPS**

**MORE NEWS, MORE REVIEWS**

# Macworld

*WIN an iMac loaded with software!*

# New Macs

**500MHz Power Mac, iBook SE, 500MHz PowerBook reviewed and rated here!**

## Ink-jet tests
**Photo-quality printers**

## MIDI Mac music
**Make No.1 hits on your iMac**

## Voice recognition
**Speak and your Mac types!**

## Woz speaks
**Apple legend: interview**

# MACWORLD

## contents

**71** Tokyo's Macworld Expo delivered the hardware that the San Francisco Expo had promised. We test the new machines – the lightning-quick 500MHz G4 Power Mac, the stylish iBook SE, and the FireWire-friendly 500MHZ PowerBook.

## April 2000

## read me first
### Simon Jary, editor-in-chief

In last month's issue I prophesied the imminent cull of several Macintosh legacy zombies – the Apple Menu, Scrapbook, Stickies and Chooser, to name just a few of the apparently doomed. Their nemesis, Apple's forthcoming next-generation operating system, Mac OS X, was unveiled at January's Macworld Expo in San Francisco. All we had to go on was a 15-minute demo, a half-hour interview with the OS X product manager, and some screenshots posted on Apple's Web site.

This month we got our hands on a Developer Release version of the modernized operating system, and its fancy new-look Aqua interface. Loading it onto a labs G3 Power Mac was nerve wracking – would we ever be able to use the blue-&-white Mac again? – but pretty uneventful. After installation, we crossed our fingers and clicked Restart, which isn't as easy as it sounds… Mac OS X was alive, and our relationship to the Mac user-interface would never be the same again. Read our special preview of Mac OS X, from page 71.

Less than two years ago, we got our first glimpse of the iMac. Apple had done it again, surprising everyone with knockout design and a return to its simple philosophy of creating a computer "for the rest of us". Almost ignoring the massed monopolists of Microsoft's Windows operating systems, Intel's Pentium processors, and countless beige-box manufacturers, Apple had reached out to millions of consumers too afraid to buy into the personal-computer revolution – reached out, held their hand, and pushed them gently to their nearest computer store.

The iMac sold by the million, and it was swiftly followed by colourful Power Macs, funky iBooks, and, er, the black PowerBook. Apple's marketshare rose steeply. Shareholders and customers alike rejoiced at the near-miraculous saving of the entire company from the brink of a widely tipped demise.

So excited were we at the success of Steve Jobs' daring rescue mission that we plum (and grape, blueberry and lime) forgot to take a longer look at our screens. Surrounded by pretty plastics, there it sat – the same old Macintosh operating system we'd stared at since System 7. Mac OS 8 and all its siblings gave System 7 a minor makeover and a few tweaks, but the changes were cosmetic. Status Quo changed more than the Mac OS in the last ten years.

You can tell when companies get desperate to add gloss to their products. These days, students living between Ladbrokes and a brewery are offered 'Platinum' credit cards. With OS 8, we were offered a 'Platinum' appearance for our menus, windows, icons and controls. We let ourselves be fooled.

After platinum, what did Apple think it could offer us? Now we know. Apple's platinum is followed by Aqua – the software equivalent of the iMac's translucent tasty plastics.

Last month, I waved goodbye to the Chooser and various members of the OS living dead. I received quite a few emails blasting me for my flippant attitude to Stickies – Apple's virtual Post-It notes. I find them irritating; others believe them a greater technology than OpenGL and QuickTime rolled into one. Breathe easy, Stickie lickies, Apple preserves these yellow devils in Mac OS X.

The Chooser does indeed die – it's time now to enter the PrintCenter for all your output needs. Key Caps becomes the Keyboard. Puzzle purists will die – no mere sliding blocks or jigsaw for OS X, there's a complete chess game nestled in this OS X Developer Release. The scientific Calculator is the best-looking thing in all of OS X. The Scrapbook is scrapped; and I've only just noticed that the Note Pad got scribbled out in Mac OS 9.

What OS X does for the Mac is erase all that ancient legacy code that made adding bright new technologies almost impossible. You can't see many of its new features, but, unlike the skips to OS 8 and OS 9, there are real technology leaps at play underneath Aqua's fancy button bubbles.

Changing to OS X is going to hurt. We're all going to be computer dummies again: dissing the Dock, losing the Finder, vacant with View… But, when you've finished banging your mouse against your screen, you might suddenly notice that when Internet Explorer crashed, the rest of your apps stayed intact; that you can run more applications at the same time; and that Apple is about to release Power Macs with more than one G4 processor in them.

Mac OS X is as up-to-date as the floppy-less iMac, the PowerBook's FireWire, the iBook's wireless AirPort, and the Power Mac's Velocity Engine. All these things will become out of date themselves in a few years. Then, we'll be quibbling again – how on earth can we survive without the Dock?    MW

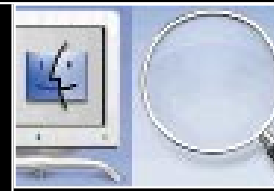COVER PHOTOGRAPHY: MIKE LAYE/ILLUSTRATION: JAMES WALKER

# Macworld

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○ Off  **source for the Macintosh market.**
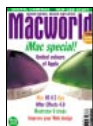
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Find out how you can get hold of Painter Classic **FREE** when you subscribe to *Macworld* – see page 115.

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### More winners, more great prizes

Hearty congratulations to the five winners of January *Macworld*'s **Fujitsu's DynaMo 1300 FE** competition. They are: Anthony Hill, Cranbrook, Kent; Rebecca Harvey, south west London; Antony Molton, Stoke-on-Trent, Staffs; Mr J Beard, Manchester; and Brazin Saric, north London.

And well done to the winners of January's Macworld Jackpot give-aways, who are:

**Angel Egg:** Mr P Dunlea Jones, Chester, Cheshire; Stewart Fleet, Norwich, Norfolk; Andrew Layhe, Craigavon, Co Armagh

**Canon BJC-6100:** Richard Evans, Lancaster, Lancashire.

**Adobe Press Ready 1.0:** Tim Clark, Loughborough, Leics; Nigel Harris, Stroud, Glos; M Sidebottom, Exeter, Devon; Martin Saucevee, Waltham Cross, Herts; Sid Porobic, Northampton, Northamptonshire

**RagTime:** Sam Musk, Beaconsfield, Bucks; Jeff Anderson, Norwich, Norfolk; Kieran Meenam, Belfast, Co Antrim; Patrick Dunlea-Jones, Chester, Cheshire; Andrew Turton, Oldbury, West Midlands.

**Virtual PC 3.0:** Mike Spence, Derby, Derbyshire; Tom Knott, Northampton, Northamptonshire.
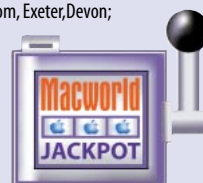
## IDG World Leaders in IT Publishing

Join in the debate, and get your queries answered at the Macworld Forum (**www.macworld.co.uk/forum**).

**This month's CD boasts Dreamweaver 3, Fireworks 3 and PiXELS:3D Studio 3.5 trials plus the full version of Eudora Pro and all the latest shareware, demos and updaters. Vic Lennard is on hand to lead the way…**

## Install Me
Before you start working your way through the software on our CD, go to the System Utilities folder and make sure you install the following:

■ **Acrobat Reader+Search 4**
Install this version to be able to read many of the on-screen manuals.

■ **StuffIt Expander and DropStuff**
Versions 5.5, 5.1.2 and 4.5 are included.

■ **System tools**
The CD also carries the latest versions of a number of essential system utilities. These include the Appearance control panel and extension, Disk Copy 6.3.3, Drive Setup 1.7.3 and ResEdit 2.1.3.

■ **Gaming essentials**
You'll also find software that many games need: OpenGL 1.1.2 and the GameSprockets 1.7.3 suite which includes DrawSprocket, NetSprocket, SoundSprocket and various InputSprockets.

## Some of the programs on this month's CD need QuickTime 4…

… so we've included QuickTime 4.1. To install the latest system extensions, control panel and utilities, drag the folder from *Apple Standards* inside *System Utilities* on our CD to your machine. Then drag-&-drop the QuickTime Install Cache file on to the QuickTime Installer and follow the on-screen prompts. The installer is a complete stand-alone package and does not need an Internet connection.

## Dreamweaver 3/Fireworks 3 Studio
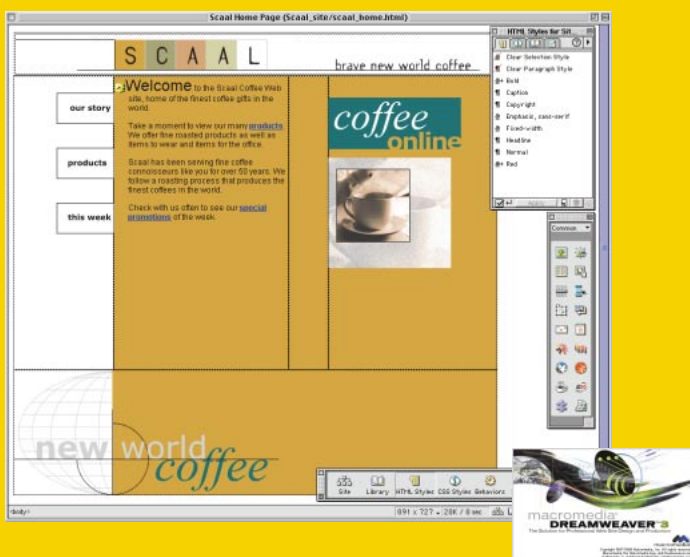
Visually design and manage cross-browser Web sites without sacrificing HTML control with Dreamweaver 3. It has a host of impressive features including a Quick Tag Editor that lets you quickly modify, add or remove the tag defined for the current selection without leaving the design view. HTML styles provide the ability to create paragraph and character styles using standard character markup, and inline image maps allow you to add hotspots, change links and targets, and apply behaviours directly in the Document window. There's an improved HTML Inspector that includes an option to show line numbers in the margin and can be tabbed with other palettes. New objects let you add dates, email, navigation bar, jump menu objects, special characters, create framesets, and insert rich media content from Flash 4, Shockwave 7 and Generator. Streamline workflow between team members and applications like Photoshop, Fireworks and Microsoft Office – Clean up Word HTML takes HTML files created in Word 97, 98 and 2000 and formats the code the way you want it.

With Fireworks 3 you can design editable Web graphics, animations and Web comps in an instant. Preview optimization and rollover effects right in the workspace. Copy paths for pasting into Flash, FreeHand, Adobe Illustrator, Photoshop, CorelDraw and more. Gamma preview, lossy GIF optimization and changes to brightness/contrast, hue/saturation and levels/curves make for an easy working environment. Preserve transparency, rotate canvas, preview font before applying… the list is almost endless. You can even apply Photoshop's native filters as Live Effects. And once created, Dreamweaver's Insert Fireworks HTML makes it easy to import the HTML, JavaScript, images, image maps and behaviours that result from a slicing operation in Fireworks.

The CD contains installers for full 30-day trials of each.
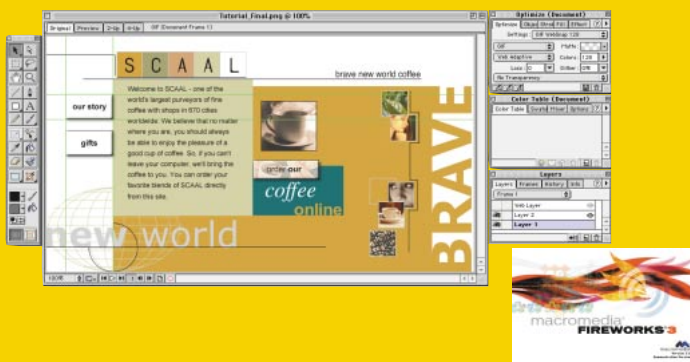
## Serious Software
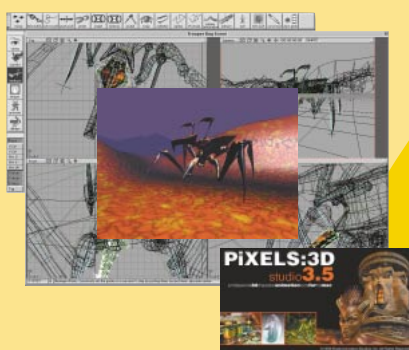
### PiXELS:3D Studio 3.51

Create and animate 3D characters in PiXELS:3D Studio. Build and edit organic models in real time, create and apply textures/materials, and position objects and lights within a scene. Produce broadcast-quality renderings of your animations.

A demo on start-up, log on to www.pixels3d.com/download.html and fill out the registration (including your machine ID). A serial number will be sent to you by email for a 30-day fully-functional trial.
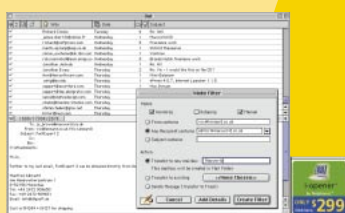
### Eudora Pro 4.31

Own Eudora Pro for free! Find messages quickly with powerful search functions. Manage multiple email accounts easily. Send/receive email in the background and enjoy the advantages of a word processor with automatic spell checking. Engage in more complete communications through easy handling of attachments and the ability to view HTML and graphics right in the body of a message.
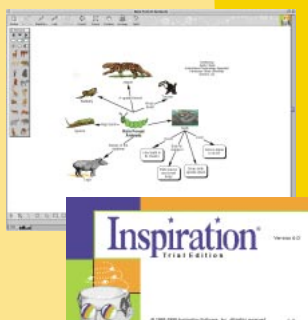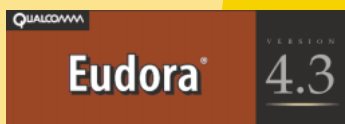
### Inspiration 6

Inspiration is the premier tool for developing ideas and organizing your thought processes. It integrates an expanded range of visual learning and thinking techniques with the latest standards in graphics and Internet technology. New features include enhanced symbol libraries, expanded visual learning, and Internet support– integrate URL hyperlinks into both Diagram and Outline views.

The 30-day trial is fully functional.

## Inside Macworld

Our Serious Software folder also hosts 24 programs that tie in with Mac OS 9 Tips, Product News and the Shareware feature. These include:

| | | |
|---|---|---|
| Default Folder 3.0.5 | NetShred 1.3 | Ultra Lingua FR-ENG 2.2 |
| GraphicConverter 3.8 | Redefine Style Sheet 1.0.1 | VSE My Privacy 1.0 |
| MacBreakZ 2.1 | Simple To Do 1.1.3 | Web Confidential |

## Don't miss…

■ **Cool Extras!** Eight panoramas from Wrinkle 2000 *plus the Macworld Office panorama*

Virtual Hamster
*Rodent without the droppings!*

■ **CD Catalogue** DiskTracker 2.0

■ **Mac ISPs** Internet access offers from AppleOnline & FreeUK.

■ **plus…** Many thanks to IconFactory (www.iconfactory.com) for our CD icons.

## Also on the CD

**APPLE** *(in the System Utilities folder):*
AirPort Update 1.1
iMovie 1.0.2 Update
Mac OS 9 Audio Update 1.3
Macintosh Manager 1.2.4
MRJ 2.2
Software Update 1.1.1

**COMMS & INTERNET**
*21 applications including:*
Email Effects 1.6.2
Greg's Browser 2.6.1
HTML Optimizer 2.7
POPThing 1.5

**EDUCATION**
*Four programs including:*
English-Italian Dictionary 5.9
KnowledgeMiner 3.1

**GRAPHICS**
*13 items including:*
Etchelon Tracer 3.6.1
Fractal Explorer 1.5.3
Meshwork 1.6
Pixel Spy 1.3.1
Rainbow Painter 1.7.0
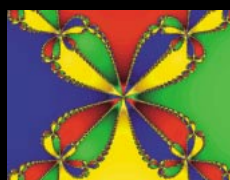
**ICON UTILITIES**
Candy Hearts icons
Iconographer 1.1
PreviewMaker 2.3

**INFO**
1984 on-line issue 21
AppleWizards Jan 00
ATPM 602
MyMac 58
*plus seven items for developers*

**MATHS & SCIENCE**
*10 utilities including:*
MI Convert 2.5
Starfield Creator

**NETWORK**
Helios LanTest 2.5.2
NetXchange1.1.1

**SOUND & MUSIC**
*Eight applications including:*
BayTex Party! Pro 2.0
PlayerPRO Plugin 2.1
Studio system 2.1

**UTILITIES**
*Ten categories comprising over 50 useful tools for your Mac including:*
AutoCat 2.6
BTV 3.2.5
Drag'nBack 3.1.2
I Love Native! Pro
MacArmyKnife 1.72
Net-Print 8.2
Power Windows 2.2
QXP Images Catalog 2.1
TextSpresso 1.5.6

**UPDATERS**
*This month's dedicated updaters folder includes over 60MB of patches to bring many popular applications bang up-to-date, including:*
Altivec Tool for Canvas 7
Art•lantis 3.5.1
ASTARTE M.Pack 3.5.1
FAXstf 5.1
Flash 4.0a
FlightCheck 3.73
iMate 1.7.7
Linocolor 6.05
MenuFonts 8.2.1
Norton AntiVirus 5 & 6 (02/00)
SpellTools 1.4
TypeStyler 3.5.8
Virex (02/00)

## Other demos & trials *include:*

CtrlP
MYOB Accounting Plus
Now Up-to-Date & Contact 3.8.3
Starry Night Backyard (needs activation code via Web site)
VSE Web Site Turbo 3.0.2
XPressImage Pro 3.0.2
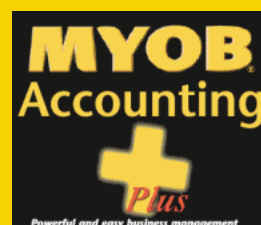
## Shareware

Shareware is a distribution method, not a type of software. It makes fitting your needs easier, as you can try before you buy. Shareware has the ultimate money-back guarantee – if you don't use the product, you don't pay for it. If you try a Shareware program and continue using it, you are expected to register. Support shareware authors so that they continue to provide high-quality programs for the Mac.

Association of Shareware Professionals

# Sid Meier's Alpha Centauri
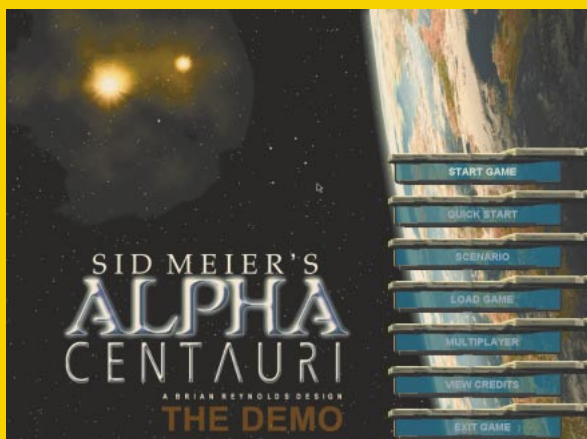


You have signed on to a UN mission bound for Chiron, the only habitable planet orbiting earth's nearest celestial neighbour. En route, a reactor malfunction occurs, awakening the crew from hypersleep and sparking a mutiny that divides the crew into seven ideologically opposed factions. You lead one of these factions in a desperate attempt to escape your doomed ship as Chiron's gravity well sucks her into a decaying orbit.

At the start of a standard game, your faction has just made planetfall and founded its first base. Bases provide the foundation of your faction's power, producing new military units and base facilities, sheltering your people from the planet's noxious atmosphere, and serving as the centres for your industry, culture and economy. Your first tasks: explore your immediate surroundings, build a colony pod, select a suitable site for a new base and found a second base with your pod.

Check the Quick Start file for system requirements.

# Mighty Mike

Toy Mart has closed for the evening. The clerks have long since turned off the cash registers and the midnight janitor has left. Then the store comes alive as dolls, action figures and game pieces jump to their feet. Suddenly there is a commotion in the Doll Department! One of the cages in the Stuffed Animal Zoo has broken open and hundreds of Fuzzy Bunnies hop out of the cage and scatter. "I WILL HELP YOU!" storms a deep, resonant voice from one of the shelves. Yes, it's Mighty Mike (formerly Power Pete) – the most powerful action figure money can buy!

The demo lets you play the first three levels of the game but stops working after about an hour of play.



# Games World

This month's Top 10 Shareware games is a haven for game addicts. Top position goes to iPoker 2000, a superb rendition of draw poker with excellent graphics, voices and gameplay. Major updates include Polyominoes 7.0 and Trinity 1.1, plus there's updated versions of Brickles Deluxe, ChessWorks, David's Backgammon, Digital Wipeout and Killer Dice Y2K, not to forget Hang2000 for the younger readers! And don't miss Nanosaur Extreme – though you'll need a 350MHz processor, ATI Rage 128 graphics card and 96MB of memory to play it!

A number of games have been updated, including Bugdom 1.1 and Star Wars Episode One Racer 1.0.1.


iPoker 2000


Nanosaur Extreme

## Macworld CD catalogue

**Courtesy of Mark Pirri's superb DiskTracker program, Macworld brings you a searchable catalogue of all our CDs from 1997 to 2000 – almost 155,000 files! This will grow month by month to allow you to find any file you want, without wearing out your CD-ROM drive. The latest version of DiskTracker (2.0) is also included – don't forget to register if you find our library useful.**

# New Macs roll-out    at Tokyo Expo

**Speed increases, extra RAM, larger hard drives, FireWire added, AirPort all round… Phew!**
- 500MHz PowerBook G3
- 500MHz Power Mac G4
- Special-edition Graphite iBook

**A**s expected, Apple CEO Steve Jobs used Tokyo's Macworld Expo to announce a host of new and upgraded Mac systems. With the iMacs updated to DV models last October (see *Macworld*, November and December 1999), only the iBook is not now immediately digital-video-capable. In front of 6,000 Apple aficionados, Jobs said: "We've got five or six things to tell you about today, so let's get started."

### 'Pismo' PowerBook goes DV
Apple has at last revealed the new PowerBook range that was a surprise no-show at January's Macworld Expo in San Francisco (see *Macworld*, March 2000).

The top-of-the range professional portable Mac now features a 500MHz G3 processor that, Jobs claims, does not slow down when the machine is switched to battery mode. It features a 100MHz internal bus (up from 66MHz), Ultra ATA66 hard drive (up to 18GB), ATI Rage Mobility 128 sound system, DVD-ROM/DVD-Video drive, two FireWire ports and support for Apple's 11 megabits-per-

second AirPort wireless-networking system. Now all Macs are AirPort-capable.

Apple is following its iMac DV lead by adding fast connectivity in the form of 400Mbps FireWire, which lets creative pros simply transfer pro-quality digital video with DV camcorders or external hard drives.

"The new PowerBook is the best tool in the world for creative professionals," said Jobs. "For example, with Final Cut Pro video-editing software, it's the ultimate mobile movie studio."

The new FireWire connections essentially replace the SCSI port in Apple's previous PowerBook G3. Apple says the FireWire ports can power connected peripherals even when the laptop is running on a battery; by contrast, some of the FireWire PC cards, such as Newer Technology's FireWire2Go, work only with self-powered peripherals.

The PowerBook also supports Apple's new FireWire Target Disk Mode: if you connect the laptop's FireWire port to a FireWire-equipped Power Mac, the laptop's hard drives appear on the Power Mac's desktop. Apple previously offered a similar feature for SCSI-equipped PowerBooks.

To boost video performance, Apple has configured the laptop with ATI's new Rage Mobility 128, a version of the Rage 128 graphics controller designed for use in portable computers. The controller supports the new PowerBook's AGP 2X video interface (the same one in the Power Mac G4) and includes 8MB of SDRAM. Apple says the chip offers up to twice the 2D performance and up to three times the 3D performance as the Rage Mobility controller, which the company used in previous PowerBooks (and still uses in the iBook).

The addition of FireWire and AirPort brings the PowerBook into line with the rest of Apple's range. The new PowerBook is AirPort ready with a built-in slot for the AirPort Card and two built-in antennae for communicating with the AirPort Base Station.

The machines also have a five-hour battery life, which, Jobs was keen to point out, was a "real five hours" and no exaggeration by the company. With two batteries installed, a PowerBook user could fly from London to San Francisco without turning off his or her portable Macintosh.

The £1,699 (excluding VAT) entry-level PowerBook now runs at 400MHz processor, with 64MB of memory and a 6GB hard drive. A 500MHz model is available with128MB memory and either a 12GB (£2,349) or 18GB hard drive (£2,737). All models include a 56Kbps modem.

The survival of the G3 chip in Apple's pro portable disappointed some observers, who had been hoping for a G4-based PowerBook. However, Apple says that the current G4 design is too hot and power-hungry for laptops. Apart from the chip, the new laptop has the same system

architecture as Apple's Power Mac G4, with a 100MHz system bus (compared with 66MHz in the previous-generation model) and an internal connection for the AirPort card. Rumours abounded on the Internet suggested that 'Pismo' PowerBooks would have a more "clamshell" case design, rather like the iBook. However, aside from the added FireWire ports, the case design remains identical to the previous range of PowerBooks, with the same sleek black design and translucent bronze keyboard.

"We're in no hurry to change this design," explained Greg Jozwiak, Apple's product marketing manager for portables, who scoffed at suggestions that the PowerBook sports a conventional laptop appearance. For those customers who desired a sober but new-form Mac portable, Apple has a different solution.

### iBook goes grey
In the consumer-portable sector, Jobs unveiled upgrades for Apple's existing iBooks, and a special-edition Graphite iBook – a companion to the iMac DV Special Edition already on sale. The iBook SE is effectively Apple's sober but new-look portable.

The upgraded iBooks feature double the memory of existing machines – up to 64MB – and double the hard-drive space – up to 6GB – but will be sold at the same £1,062 (£1,249, including VAT) as the original models. Tangerine and Blueberry models run on a 300MHz G3 processor.

The iBook SE packs a 366MHz G3, but boasts the same memory and hard-disk configurations as the standard machines. Its Graphite colour case is considerably more subdued than the bright Blueberry and Tangerine models. It doesn't, however, sport FireWire ports for digital-video functionality.

For the extra processor oomph and new colour, the iBook SE costs £1,190 (£1,399 including VAT).

The new iBook line retains the design that includes a rubber-coated translucent enclosure, a pullout handle for safe carrying, and a unique closing mechanism without latches.

Jobs said: "The iBook has been a big hit with consumers, students and educators, and we want to make it even better. The iBook Special Edition is the most elegant iBook ever."

Apple's Mac line-up is as sophisticated and mature as it's ever been. How will Apple dare dabble with it in the future?

**Simon Jary & Stephen Beale**

■ New Macs tested, from page 71.

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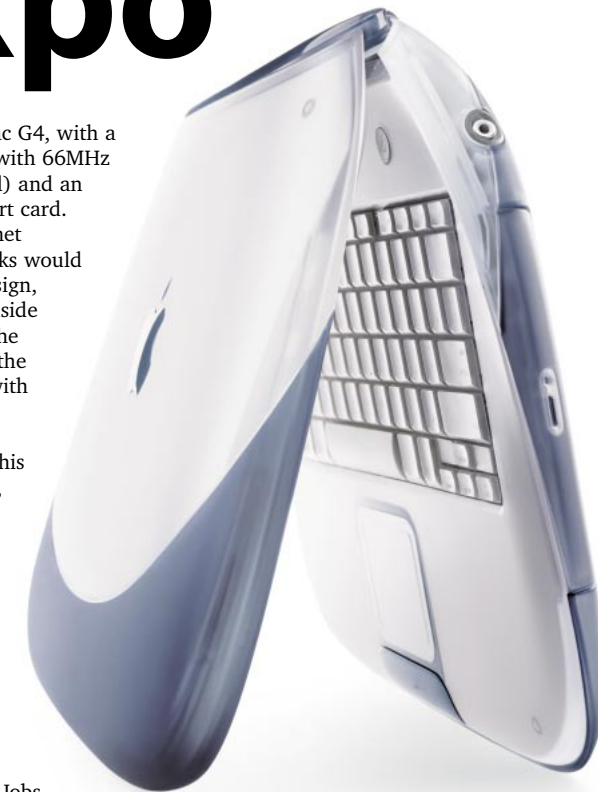
## 500MHz G4 Power Macs at last

### High-end model is '50% faster' than 800MHz Pentium III PC

**O**n top of its new, faster portables, Apple used Macworld Expo Tokyo to increase the performance of its Power Mac G4 line with faster processors running at up to 500MHz. Pricing remains unchanged, starting at £1,099. The new line up is effectively that which was initially announced last October, but downgraded due to a shortage of high-end G4 chips (see *Macworld*, November 1999).

Apple claims that the new 500MHz Power Mac G4 runs professional applications, such as Adobe Photoshop, "over 50 per cent faster" than 800MHz Pentium III-based PCs.

"The Power Mac G4 is the tool of choice for creative professionals," said Steve Jobs, Apple's CEO. "Not only is it the fastest Mac ever, it's the fastest personal computer ever."

### Specs appeal
The G4 is available in the following standard configurations:

An entry-level £1,099 Power Mac G4 runs at 400MHz with 64MB of RAM, 10GB Ultra ATA/66 hard drive, and a built-in V.90 56K modem. A £1,699 Power Mac G4 runs at 450MHz with 128MB of RAM, 20GB Ultra

ATA/66 hard drive, ZIP drive, and built-in V.90 56K modem.

A 500MHz Power Mac with 256MB of RAM, 27GB Ultra ATA/66 hard drive, and ZIP drive costs £2,349. For £5,148, this model is available with Apple's 22-inch flat-panel Cinema Display.

All G4 Power Macs boast 1MB backside cache, ATI RAGE 128 Pro AGP 2X graphics card with 16MB video SDRAM, DVD-RAM drive with DVD-Video playback, FireWire and USB ports, and 10/100Base-T Ethernet. In addition, all G4 models support Apple's AirPort wireless-networking solution.

### Server sauce
Apple also announced two new Macintosh Server G4 systems, with prices starting at £1,999 for a 400MHz G4 Server containing 128MB RAM, 20GB 7,200-rpm Ultra ATA hard drive, and AppleShare IP 6.3.1. A 500MHz G4 Server, with 256MB RAM, 18GB Ultra2 LVD

SCSI 10,000-rpm hard drive, and AppleShare IP 6.3.1, costs £2,849. For the same price, a similar model runs Mac OS X Server 1.2 and boasts a four-port 10/100Base-T ethernet PCI card. At the high-end, £4,069 gets you a four-port ethernet 500MHz model running Mac OS X Server 1.2 – with 256MB RAM, and 18GB Ultra 2 LVD SCSI hard drive. **MW**

■ Check *Macworld*'s Test Centre results in the feature, starting at page 71.

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| iReview | iTools | iCards |
|---|---|---|
| Hardware | Software | Education | Creative |

## iTools go global

**A**pple's free iTools are now available throughout the world, just a month after their North American-only roll-out. The revamped Apple UK Web site now has the new-look top tab bars, as well as iCards and iReviews.

iTools offers a suite of services that's free to all running Mac OS 9. There are currently four iTools:
■ **KidSafe** protects children on the Internet, by specifying what kids can see.
■ **Mac.com** is a free email service that gives you an exclusive address.
■ **iDisk** is the premier service, offering a full, free 20MB of personal storage on Apple's Internet servers.
■ **HomePage** helps you build your own Web site - in less than 10 minutes.

Go to www.apple.com/uk to claim your free iTools.

16   Macworld APRIL 2000   **Macworld online**   For the information as it happens visit Macworld Online Daily News (www.macworld.co.uk), updated throughout the day

Macworld   APRIL 2000   17

# Land of the Rising Apple

**T**he 'Pismo' PowerBooks may not have a radical redesign as rumoured. The new iBooks may not sport DVD and FireWire as rumoured. No iMacs with 17-inch screens were unveiled as rumoured. And no Apple-Palm PDA (if such an animal is even in the works) saw the light of day – as rumoured.

Some people are disappointed that none of these things happened, but the fact remains that Apple used a non-US trade show to roll out substantial new products.

That it happened at February's Macworld Tokyo shows just how important Apple considers the Japanese market.

Japanese Mac lovers are as enthusiastic as fans of the platform elsewhere, if not more so. Roaming the floor show of the Tokyo expo, you'd have seen all sorts of Mac-related memorabilia flying off the shelves – from iClock alarm clocks to Mac OS X T-shirts.

Keynote attendees began lining up five hours before the keynote speech of Apple CEO Steve Jobs. And approximately 180,000 Mac fans attended the show, according to Setsuro Tamia, president and CEO of IDG Japan.

### Growth target

The only surprise – given that Apple is now the fourth-ranked computer vendor in Japan (with a 7.8 per cent market share) – may be that Macs don't have an even bigger slice of the Japanese pie.

But with Mac sales exploding in Japan, where the consumer iBook and iMac are extremely popular, Apple sees the country as vital to its long-term future growth.

Apple's apparent rededication to the Japanese market and Jobs' announcement that Mac OS X will be a "global" operating system are signs of a new world view at the Mothership.

After Apple's recent kick-em-in-the-face attitude in withdrawing from the Apple Expo slated for London (**www.macworld.co.uk/expoexit**) – and the constant reshuffling of its European divisions – the company needs to show the world that it's devoted to *all* its customers. Perhaps Macworld Tokyo is a start in this direction.

In a nod to the Japanese consumer, Apple's forthcoming OS X operating system will contain five new Japanese character fonts as standard, each featuring 17,000 Japanese characters.

Jobs also took time to introduce Japan to Mac OS X, which he said would ship as a single CD containing all language versions. This would enable Apple to ship the Japanese language version on the same day as the English version ships.

Claiming a 7.8 per cent share of the local PC market, Jobs said surveys have found Apple is selling more to first-time buyers in Japan – 50 per cent of iMac buyers are first-time computer users, compared with 30 per cent in the US. Among buyers of the iBook, 36 per cent are new customers, against 26 per cent in the US, while 65 per cent of buyers hadn't seriously considered buying anything else.
**Dennis Sellars**

# Tokyo Expo reaction positive, but muted

**A**pple's announcements of a new PowerBook, souped-up iBook, and upgraded Power Mac G4 line at Macworld Expo Tokyo left analysts upbeat, if unsurprised.

Charlie Wolf, an analyst with Warburg Dillon Read, said the announcements constituted "almost the least surprising hardware introduction (Apple) has had in some time."

The products, such as the new £1,399 (inc. VAT) iBook Special Edition, were widely anticipated, Wolf said: "The graphite iBook was almost a lay-up, it was so obviously needed in the line of consumer portables".

"The real surprise was that (Apple) stock rose 10 points before the products were rolled out. It's like the market hoped something more would be announced," he added.

Louis Mazzucchelli, an analyst at Gerard Klauer Mattison & Co, said: "There was some sense of anticlimax" because most of the products had been rumoured for some time.

However, Mazzucchelli said, the announcements "should reassure people" concerned about Apple's hardware upgrades. "There's something for everybody – professional users get a new PowerBook and new (Power Mac) G4 lines; consumers have a new iBook," Mazzucchelli said.

Tim Bajarin, president of Creative Strategies, agreed: "The new iBook is a winner; it has much more power for the same price."

Bajarin said he didn't see any surprises in Apple's announcements, but was pleased to see the portable movie system working with PowerBooks. "I use a digital camera in the field; now I can edit the movie right there, instead of having to go home to do the editing," he said.

### Pismo possibles

The PowerBook had been expected to ship in January at Macworld Expo San Francisco. Bajarin said the chip needed for the portable may have been delayed, so the PowerBook's rollout was held up.

"Or Apple may have decided that San Francisco was a better forum to show software innovations, like Aqua," so developers would have three or four months to ponder the new user interface and other features before WWDC, the annual Worldwide Developers Conference, Bajarin concluded.

Apple will offer developers the latest information on hardware directions as well as software and other updates at its Worldwide Developers Conference, set for May 15-19 in San Jose, California.
**Wendy Mattson**

# USB 2.0 'faster than FireWire'

## Connectivity standards in battle for hottest links

The connections between your Mac and peripherals are about to get white hot, with technology pushing USB speeds up to 40 times faster than presently enjoyed and FireWire performance doubled.

USB connections – between keyboard, mouse, scanners, and other tools, on Apple's recent Macs – currently run at 12 megabits per second (Mbps). USB 2.0 will deliver up to 480Mbps said Pat Gelsinger, vice president and general manager of Intel's desktop products group at the Intel Developer's Forum. Intel, which developed USB, belongs to the USB Promoter Group, with Compaq, Hewlett-Packard, Microsoft, NEC, Lucent and Philips.

### Back 2.0 to the future

The first USB 2.0 devices will be with us in months, and since the new standard is backwards compatible, current USB-ready devices will work too. It is expected that USB 2.0 upgrade cards will become available for users of earlier systems.

USB 2.0 challenges Apple's FireWire (IEEE 1394) technology, which currently runs at 400Mbps. But Richard Davies of the FireWire Trade Association states: "FireWire is moving ahead fast, with 800Mbps silicon due from Lucent and TI in the second quarter, and volume production starting in the second half of the year."

FireWire – originally developed by Apple, and now used by Sony (which calls it iLink) and other computer/peripheral makers – is most commonly used for digital-video connectivity between digital camcorders and computers, such as the iMac DV. All of Apple's Macs – bar the consumer portable iBook – are now FireWire friendly.

Most FireWire evangelists maintain that the FireWire standard is the best-suited for video, especially in light of its increasing take-up among video camera manufacturers. USB 2.0 is set to compete though, as it too will offer a viable solution for speed-critical computing functions.

### Fire storm

A variety of FireWire compliant products are set to enter the market, according to Davies. "One manufacturer will introduce five new models of FireWire scanners in 2000, and three more scanner makers will introduce product in the second half of 2000," he revealed. Equally telling, he said that the FireWire Trade Association is receiving calls from third-party developers who are doing R&D for "the big guys".

In the USB corner, Jason Ziller, head of the USB Promoter Group, said specs for the new USB 2.0 standard will be published this spring. The first products will ship later this year, and by 2002 most PCs are expected to ship with USB 2.0.

Products most likely to take-up USB 2.0 will include scanners, DSL modems and external storage devices. On FireWire's implementations, Richard Davies said: "2000 will be the year of desktop cameras and scanners, 2001 will be the year of printers, including devices that allow manufacturers to sell products to people who do not own PCs."      **MW**

**Tom Mainelli & Jonny Evans**
FireWire Trade Association, **www.1394ta.org/**
USB Organization, **www.usb.org/**

## Apple Audio Update 1.3

Apple has released Audio Update 1.3 for Mac OS 9, with improved USB support and support for the Harman Kardon iSub speaker. The update also enhances playback for DVD drives.

The updated Updater is Apple's attempt to resolve user complaints regarding the previous upgrade. Apparently, after installing Audio Update 1.2 the popping in DVD playback did not cease, but became less frequent and extreme. Audio remained out of sync, with the audio running ahead of the video channel.  **MW**

# BT Web: cheaper or cheater?

BT Internet customers will enjoy unlimited Internet access every evening and at weekends. Ben Andradi, managing director of BT Internet, said that this "demonstrates our commitment to getting the UK on the Net".

The BT Internet tariff is, ironically, cheaper than BT's recently announced Surftime package, which costs £35 per month. Surftime is BT's offering for ISPs to use for their own unmetered packages. David Pincott of BT Internet, admits: "We're in a Chinese war with BT. BT Internet is making this offer, not BT."

BT Internet now costs £9.99 per month. The new rates mean BT's surfers will enjoy unmetered Internet access for 78 hours per week at off-peak times. With BT undercutting itself, ISPs complain BT is running a monopoly – the company not yet furnishing them with a competitive product.

The central concern is the opening of the UK's telecoms infrastructure to competition. BT has set a July 2001 deadline to open up its local-access network to free competition.

"We don't expect everyone to come to us in droves, people use different ISPs for different needs," says Pincott. He wouldn't disclose what advantages other ISPs could have over BT Internet's unmetered data calls, nor could he say which products BT would introduce to boost competing ISPs.

The other hope for deregulation in the telecoms market, Asymmetric Digital Subscriber Line (ADSL), is reportedly suffering delays, though a recent press release from BT claims the company will have 400 ADSL exchanges running by this spring. ADSL uses existing copper-wire telephone lines for multimedia and high-speed data communications. Connection is made by a pair of modems, one at the user end and the other at the Exchange. The modems exploit the physical transmission capabilities of copper lines beyond the frequencies used for normal voice calls and offer faster data rates than analogue modems.  **Jonny Evans**      **MW**

# Adobe's dash to smash Flash

## LiveMotion 1.0 sparks Web animation battle

**A**dobe's next-generation print- and Web-publishing products will be aimed at the emerging broadband market, company bosses revealed at February's Seybold conference (see page 26 for more on Seybold).

"Publishers want to make money from the content they produce. Adobe provides publishers the tools required to profit from that content across mediums," said John Warnock, Adobe's CEO and chairman.

Bruce Chizen, Adobe's executive vice president of worldwide products and marketing, said: "The broadband Web will be the central marketplace where all products, services and content will be accessed. People will go to the Web to find what they want, and choose how they want to consume that information – through a browser, a handheld device, or print."

Adobe believes that the broadband Web will justify greater animation, streaming video and interactivity on the Web. In a dig at rival Macromedia's vector-based Web animation tool, Flash, Adobe claimed that designers are "on their knees begging for something easier".

### Second that LiveMotion

Attendees were treated to a preview of Adobe's new Web animation product LiveMotion – unofficially dubbed a "Flash-killer". Adobe is positioning LiveMotion as an author for "high-impact" interactive elements and "engaging" Web animation – rolling motion, sound and interactivity into lively Web graphics. LiveMotion exports to Flash file formats, as well as standard static file formats like GIF, SVG, PNG and JPEG.

An object-oriented, vector-based application, LiveMotion has familiar drawing tools, and integrates closely with Photoshop and Illustrator. Live Photoshop filters can be applied without leaving the application.

A key LiveMotion feature is transparency – users can create partially transparent graphics, and overlay vector objects on bitmaps.

A Styles feature groups creative effects that can be saved and then applied to other objects. Attributes such as colour and opacity can be animated in a non-destructive manner, and edited at any time. LiveMotion automatically inserts the end keyframe and tweens the effect between start and end keyframes.

Designers can combine images and vector objects to create more complex shapes – via actions such as unite, intersect, and exclude.
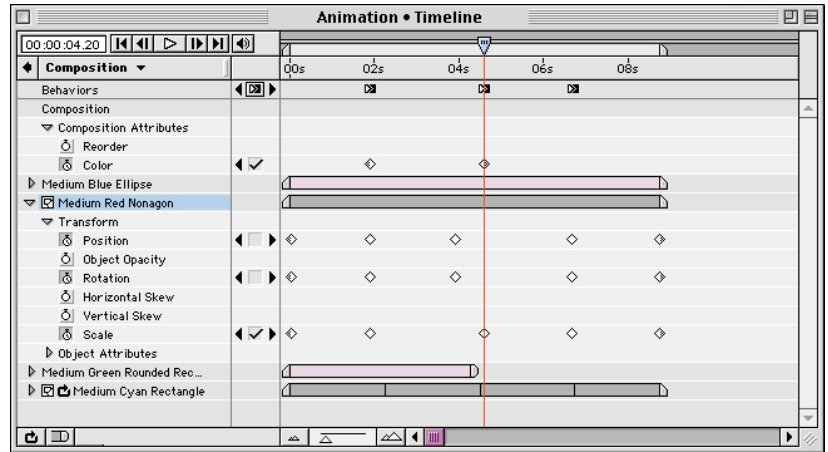


LiveMotion 1.0 does not support video, but Adobe's Web-graphics senior product manager Michael Ninness said that the LiveMotion development team were all ex-Avid "video geeks". It would, therefore, be a "natural progression" for later versions of the product to handle video, according to Ninness.

LiveMotion ships at the beginning of May. The first release of LiveMotion is compatible with Mac OS 8.5 through to OS 9, but Illustrator product manager Dave Burkett assured *Macworld* that the company would support Mac OS X in subsequent releases of its major products. **mw**

**Louise Banbury & Jonny Evans**

*Organizing LiveMotion (above)*
*LiveMotion's object-based timeline is based on that of After Effects. Because it isn't layer-based like Flash's timeline, nearly every attribute – position, opacity, shape, rotation, scale, colour, special effects, and text – of every object can be independently animated.*



## InDesign gets InProduction and update

**I**nProduction 1.0, a new tool for PDF print production, was also unleashed at Seybold. This set of five tools improves workflow, with a Preflight tool, Separator tool, Trim/Bleed tool (pictured above left), Color Converter, and Adobe in-RIP Trapping feature.

Since Seybold, Adobe announced an update to its InDesign DTP application. **InDesign 1.5** has new drawing tools – Pencil, Erase and Smooth – and a new Eyedropper tool that copies attributes such as text formatting between objects.

The work area is now customizable – for example, users can change the layout of the toolbox, and palettes are now dockable.

Designers can now align text to a path, sketch artwork on-screen, perform multiple transformations more easily and wrap text around imported EPS and PDF files – see screenshot above right. InDesign 1.5 is expected to ship in late spring. **mw**

# XPress ticks to 5.0

## Seybold 2000: Quark's new media for old

*Synthetik Software (**www.synthetik.com**) demonstrated Studio Artist 1.5. New features include editable keyframe time animation of all features, expanding the range of visual effects for movie processing and interactive 2D painting.*

At the Seybold publishing show, Quark tantalized attendees with a glance at the core features of QuarkXPress 5.0, expected to ship in the fourth quarter of this year.

Quark 5.0 will let users design and layout documents for export as HTML, including support for image maps, rollovers, metatags and forms. Hyperlinks will be supported, as will all basic HTML page options – including background images and page titles. XPress style sheets get extra power with the addition of cascading style sheet formatting for the Web. HTML code generated by XPress 5.0 will be table-based for compatibility with version 4.0 Web browsers.

Richard Jones, president of Quark's desktop division, said: "XPress 5.0 customers can stop worrying about print or Web publishing and focus on publishing."

XPress 5.0 will have the ability to export documents in PDF format without using Adobe Acrobat Distiller. Other features show promise, too. The tables feature, for instance, allows layout artists to quickly and easily organize text and image data. The layers feature helps to isolate items in a document for ease of editing and manipulation. Layers can be re-arranged so they display in any order, and text runaround is maintained even when a layer is hidden.

Extensible Markup Language (XML) support is integral to Quark. Tim Gill, chief technical officer, said: "To remain competitive publishers need to work with content independent of its delivery format. They need different layout for print, PDF, HTML, WebTV, hand-held devices with a different look in each medium."
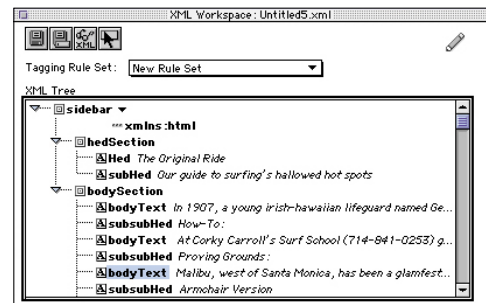
**XML**
*It's not all HTML and PDF in XPress 5.0, as Quark promises to bundle avenue.quark free with XPress 5.0, giving support for XML. With XML, people can make up their own tags, which expands the amount and kinds of information that can be provided about the data held in documents.*

Quark promises more power to the publishers. Mark Lemmons, vice president of strategic development, said: "We're adding features to our existing products and developing solutions that streamline the process of making content flexible and media-appropriate".

Gill also announced two Quark client/server products – Mac support is client-only on both. QuarkDMS is a powerful digital-media system; eStage lets users pull information from multiple databases and publish it in print or online. It uses XML and Internet Content Exchange (ICE) to transfer content to other Web sites and is aimed at database and catalogue publishers. eStage won a 'Hot Pick' recommendation at Seybold. **MW**

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## Seybold: let readers take over your Web site

The Seybold Publishing 2000 conference launched with a discussion on the theory that the key to successful Internet publishing is interactivity, getting readers to contribute ideas and discussion.

"Any good publisher is always aware of what their readers are doing," affirmed Roger Black, chief creative officer of circle.com. All the speakers agreed that you must invite readers to participate in the site.

Speaker Philip Greenspun, teacher at the Massachusetts Institute of Technology (MIT) and founder of ArsDigitaat, suggested that ideally concepts of commercial and community sites feed each other, surfers moving from site to site using links and recommendations from others online.

The old perception of Web sites as 'brochure-ware' is gone, to be replaced by the development of profitable online communities. The aim is to make a page interesting by reader discussion.

Dave Winer, president of UserLand Software, advocates a free-forum Internet with discussions devoid of editors so people can say what they want to say. Winer described much of todays journalism as "boring", suggesting it could be made more interesting by pulling readers in and allowing them to have more of a say.

### Info openness
Black championed full disclosure by Web-site publishers, letting readers know what information is being gathered about them and how it will be used. Publishers should not fall back on using the standard opt-out procedure, requiring visitors to say they do not want information about them to be collected.

He also noted that the Internet has somehow created the "ecclesiastical" notion that all advertisements are bad. **MW**
Nancy Weil

# Official: Mac is back

**Developers are falling over themselves in their rush to support the resurgent Apple**

**A**l Gore, US presidential candidate echoed the computer industry zeitgeist when he said recently: "You know, Apple seems to be coming back with the iMac." When a computer manufacturer becomes a topic for presidential chit-chat, something's going on.

The phenomenal turnaround of Apples' fortunes is making waves throughout the industry. Kyocera product manager Richard French sums it up when he says: "Since the launch of the iMac there's been a renaissance in the Apple market, with Apple leading the way with its innovative business and consumer products." French drove it home, saying, "After two year's absence from the Mac market, Kyocera has committed to make its entire ECOSYS printer range available to Mac." (See Reviews, page 61.)

### Impressive stats

SPSS too is backing the Mac after a notable absence. Mark Battaglia, executive vice president of corporate marketing said: "We're happy to offer Macintosh users their preferred software package on their preferred platform. We have found a way to offer a native Macintosh version of SPSS statistical software." SPSS promises both client and server versions of its product by mid-summer.

With the recent announcement of an update to OmniPage Pro – a leading optical-character recognition (OCR) application – Caere is also renewing its commitment to the Mac platform.

Bob Teresi, Caere's chairman and CEO said: "With the recent resurgence of Mac sales, we are happy to dedicate important development and marketing resources to our Mac OCR products."

Everyone wants a say – Carrie Motamedi of Sun Microsystems said of Sun's StarOffice: "We are planning a Mac port, and a schedule will be announced when we have reviewed the requirements". StarOffice, available for download for other platforms, is a free suite of powerful office productivity tools. Though Mac enthusiasts bemoan the wait, the commitment by Sun is a clear endorsement.

Novell spokesman Jonathan Cohen says his company "will demonstrate strong and expanded commitment to the Mac". (See story, below.)

Electrical giant Philips' Pierre van Lamsweerde, marketing and sales manager, said: "Apple is an extremely interesting segment of the market." All Philips monitors are Mac compatible, and the company is "seriously considering" making more of its products compatible.

Gene Pien, product marketing manager at Hewlett-Packard, sees the strength of the Mac market, citing HP's recent decision to produce scanners for it once again after a brief six months absence as proof: "Apple has a very bright future, the technology is very promising. Scanners were a very healthy business at one time. It was sad to see it dwindle, but it's good to see it recover."

Further – and frankly unexpected – support comes with the recent revelation in the book, *My Generation* by Michael Gross that Bill Gates was a big Mac fan, according to Bill's ex-girlfriend, venture-capitalist Ann Winblad. In the book, she says: "We all bought Macs. Bill bought a Mac. Bill was using a Macintosh, not a PC."

Apple has clearly changed its fortunes and sits at the hub of an enthusiastic and now expanding market that is proving too tempting for manufacturers to continue to ignore. **MW**

**Jonny Evans**

## Novel offers Mac NetWare services

**N**ovell says it will deliver NetWare 5 file and print services for the Mac by year-end. The new software will allow Macs to connect to NetWare servers more seamlessly than before, while making it easier for IT administrators to manage networks that include Macs. However, Mac networking consultants said that the software may arrive too late to have an impact because most corporations with significant numbers of Macs use Windows NT servers instead of NetWare. The company announced NetWare 5 Mac services during the 20th annual Florida Educational Technology Conference held in early March.

Novell previously offered Mac connectivity through Prosoft Engineering's NetWare client software and NetWare 5 Services for AppleShare. Prosoft said it will continue to distribute and support these products, but the new services will allow Macs to access NetWare servers using the computer's built-in networking functions.

"Right now, IT departments need to pay as much attention to the ten Macs in the graphics department as the 250 PCs in the finance group – or so the story goes," said Peter Preuss, chief technology officer of NextLayer, which provides secured and traditional email and other services.

The announcement may be good news for Macintosh users in NetWare environments, but most organizations with cross-platform networks are using Windows NT instead, said Mel Beckman, chief technology officer of Rangefire Integrated Networks. Windows NT, he noted, already provides intrinsic Mac support. "If companies are forward-looking enough to have Macs, they're already using Windows NT," he said.

John Rizzo, editor of the MacWindows Web site, agreed: "I don't see any movement toward NetWare. sI still hear about people using it, but never of new installations."

More details will be released later this month. **Wendy Mattson**

# Mac PlayStation by May

## Sony's legal block removed, but new patent case begins

Connectix has won a major victory in the US Court of Appeals in February, when lawmen reversed Sony's injunction against Connectix's Virtual Game Station (VGS) on the grounds of copyright infringement.

Proclaiming victory, Connectix immediately resumed sales of its PlayStation emulator for the Mac. However, Connectix now faces a fresh legal challenge from Sony, which has charged the company with patent infringement in an attempt to get VGS banned again.

Summing up the decision at the Court of appeal, Judge William C Canby Jr cited copyright law. He declared that: "The Virtual Game Station does not contain any of Sony's copyrighted material." He also declared that Connectix' reverse-engineering of the PlayStation was: "Fair use, necessary to permit Connectix to make its non-infringing Virtual Game Station function with PlayStation games."

### Blatant patent

Judge Canby Jr did indicate that, while the case failed over copyright issues, the look-&-feel elements of PlayStation could be construed as a patent issue. Because Sony took action initially citing copyright infringement, rather than patent misuse, he threw the case out. Sony's response is to initiate action over patent abuse.

One Connectix source described the dramatic events at the company's headquarters: "We heard the court opinion on Thursday, closed down the office for a party on Friday, then on Monday Sony slapped another lawsuit on us."

Some industry insiders believe Sony's lawyers held back its patent argument to fall back on if

the copyright suit failed, or as a negotiating weapon. Connectix is now "talking to Sony" according to inside sources.

Of its short-lived victory, Roy McDonald, CEO of Connectix said: "The court recognizes that reverse engineering is a common, legitimate, and valuable development practice, protected under law. We are pleased to be able to bring our product back to the Macintosh community and launch it in the Windows market. Now Sony and game developers can benefit from the expanded market for their games as a result of this choice."

### Call me Pal

Despite the new lawsuit, the company has gone ahead with the launch of the Windows VGS, and expects to be shipping a PAL version in the UK about six weeks later. The PAL product will work with the top 75 to 100 PlayStation games. Sony, meanwhile, has rolled out PlayStation 2 – which offers DVD-Video playback and email, as well as advanced-graphics gameplay.

The company had more good news, with the announcement of a Linux emulator for the Mac. After signing an OEM deal with Red Hat – a leading provider of the open source Linux OS – Connectix is shipping a version of its popular Virtual PC emulation software with Red Hat Linux pre-installed. This, according to Connectix, will let users avoid installation problems, and switch between the two operating systems without having to reboot. MW
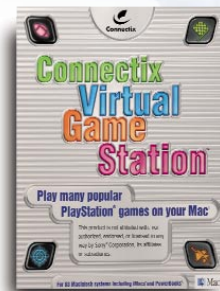


**Play away**
*Connectix's Virtual Game Station lets users load popular PlayStation games on their Macs. Sony is, no doubt, worried that similar products will affect sales of its forthcoming PlayStation 2 – see photos left and below.*





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## Hasbro targets MacSoft titles in lawsuit

Hasbro Interactive has filed suit claiming copyright violation on behalf of its subsidiary Atari Interactive. Hasbro claims its copyrights have been infringed by several companies including GT Interactive and MacSoft.

The alleged copyright violations concern software that uses gameplay elements, looks and styles that are influenced by games that are either owned or licensed by Hasbro and Atari, including Breakout (left) – written by none other than Apple's Steve Jobs and Steve Wozniak when Jobs worked for Atari in 1975.

### Pac Man eats MacSoft

Hasbro alleges that the companies in question have created variations of Centipede, Asteroids, Tetris, Pac Man and Missile Command, singling out games like MacSoft's

America's Greatest Arcade Hits 3D collection and Mac Arcade Pak series.

All the Hasbro properties mentioned have inspired countless shareware and freeware game homage's over the years, while none claim specifically to be remakes of the original games, their influences are readily apparent.

Despite the litigation, work on several Mac conversions of Hasbro-licensed products continues at MacSoft. MW
**Jonny Evans & Peter Cohen**

# news

# 3D games & Web splash in Cannes

## Apple spots possible DVD role at Milia, the interactive live content show
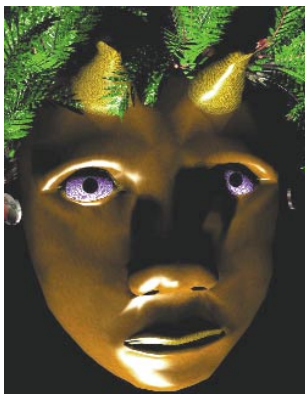
**M**ilia, the annual interactive-content industry gathering in Cannes, France, was bigger than ever this year with a new exhibition hall added specially for games and edutainment developers this February.

Unlike last year, however, Apple had a low profile – and some of last year's attendees like Adobe and MetaCreations, stayed away. iMacs were everywhere, but Apple had no stand of its own. Instead, a few Apple faces could be spotted at Macromedia's stand.

Christophe Goethals, Apple's head of marketing programmes for creative markets in Europe, explained: "The company is focusing on a few key events such as the Macworld Expos and Apple Expo in Europe, and we're channeling all of our energy into these.

"This does not mean that we're moving out of other markets. It's just a more informal presence at shows like Milia. We are here to show our support for major developers such as Macromedia."

Macromedia launched Director 8 Shockwave Studio at the show. The Studio combines graphics, sound, animation, text, video and multiuser interactivity for deployment as low-bandwidth Shockwave content for the Web, or multimedia for CD-ROM and DVD-ROM. See our full review on pages 50-51.

Managing director of Macromedia UK Fiona Coughlan commented: "We launched Director 8 at Milia because it's ideal timing for us. There's a strong focus on Internet, broadband,WAP and interactive TV, and with all these converging technologies the common denominator is content. Macromedia is well positioned to address these markets, especially with Flash and Shockwave."

### Render Blender
Other news for the Mac came from Dutch company NaN (Not another Number). NaN's Blender 3D animation and modelling package is a free 1.5MB download, offering everything for creating broadcast-quality content, multimedia and 3D game content. NaN's managing director Ian Ginn told *Macworld* that with support from Apple a Mac version might be ready in time for the launch of Mac OS X this summer. "Because it's OpenGL-compatible, we can port Blender to the Mac platform in a matter of weeks," he said.

The company also showed GameBlender, a new Blender release aimed at the online gaming community. Again distributed as a free download, this is a solid body dynamic simulation package for creating 3D worlds and interactive animations that can be shared over the Internet. Forces such as gravity, impacts from weapons, character interactions and collision detection are all handled automatically.

*3D Milia marvel*
*Blender 3D has advanced rendering tools, deformation tools, inverse kinematics and a post-production editor. The top image is by artist Jonathon DuBois.*
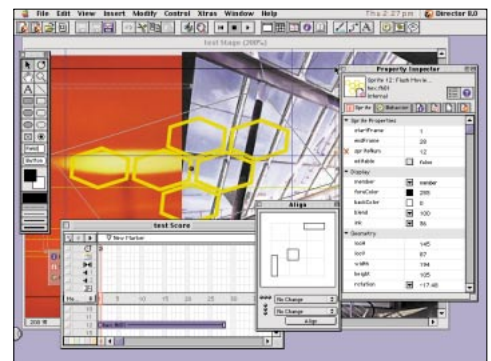
*Property values*
*Director 8 adds the new Property Inspector window, which replaces a bunch of dialogue boxes. The property inspector provides a centralized resource for properties, settings, and options for the most common operations.*

Milia is a meeting place for the interactive content industry: game developers hoping to meet publishers, and Internet start-ups looking for backing and marketing partnerships.

New this year were the ThinkTank summits and summit forums, where key industry players outlined their vision for the future. "Broadband" was one of the loudest buzzwords, with the industry poised to see how high-speed networks, interactive TV and Internet TV would affect the content industry. Robert Montgomery, president of the Fantastic Corporation, claimed : "Broadband is the place where fortunes will be made."

### DVD detached
With so much buzz about the Internet and interactive TV, one medium that seemed to take a back seat at Milia was DVD. Apple's Christophe Goethals was surprised: "I don't understand what the barriers are – are companies worried about the lack of DVD players? Or are people unsure of whether to make DVD video or Director-type applications? Maybe we should look at whether Apple has a role to play in helping this market."

A new DVD category was added to this year's prestigious Milia D'Or Awards, conceived to recognize and reward innovation in multimedia technology.

UK company EuroTalk was nominated for the DVD-ROM prize with its language-teaching interactive DVD, Advanced English with Inspector Morse (see review, page 59). The company was keen to point out that all its DVDs are Mac-only. However, the prize was won by German company United Soft's Kosmos WeltAtlas 2000. Sony's *Taxi Driver* won the DVD Video award. **MW**

**Louise Banbury**

# Apple plans Mac jr?

**Tony Smith says Apple is hinting about a cut-down Mac information appliance**

At the end of February, Apple invited a bunch of market analysts round to tell them it expects to achieve double-digit revenue and unit sales growth during fiscal 2000. That's good news, but what was really interesting about the briefing was the company's hint that it's considering an entry into the information appliance market.

According to Merrill Lynch analyst Steve Fortuna (as recently reported by Bloomberg), the Mac maker is on target to sell 40 per cent more iMacs, iBooks, Power Macs and PowerBooks this year than it did during 1999. That translates to revenues rising by around 36 per cent above last year's figure.

And then Fortuna noted that Apple bosses "alluded" to the "possibility" of an information appliance in the works. "Information appliance" is the IT industry's flavour of the month. PC companies have for years been fielding technologies and systems that they hope to sell to the great unwashed, who sternly refuse to buy computers, because they can't afford or, more likely, don't need them.

Windows 95 was supposed to make PCs easy enough to use for consumers – that is, the mass of working-class folks out there, as opposed to the middle-class types who tend to suck up all this mainstream IT kit, whether they need it or not – as was Windows 98. Neither seems to have succeeded. Nor have more consumer electronics-style products like WebTV.

Apple has been here too, with its ill-fated Pippin. The PowerPC-based device suffered at the hands of a developer that – surprise, surprise – couldn't make up its mind what the machine was for. Did it want the machine to be a games console, a cut-down family-oriented PC, an Internet-access device or all three? Different Apple staffers had different ideas, and without a consensus, Pippin became a classic "Jack of all trades, master of none".

Apple went on to develop the iMac, a far more sensible system since home-computer buyers tend to want to buy what they consider to be a "real" PC rather than a cut-down box. The conundrum for Apple is that having sold the iMac on the ease and speed with which it can be hooked up to the Net, it's now considering an appliance the whole point of which is the… er… ease and speed with which it can be hooked up to the Net.

Fortuna is keeping mum on any details Apple may have given him, so at this stage almost nothing about Apple's thoughts on the matter is known for certain. However, it has to be said, for such a consumer-oriented company as Apple not to be thinking about an entry into the appliance market (even though no such market really exists, and may never exist outside bullish executives' sales strategies) would be, well, unthinkable.

So can we expect some kind of Mac OS-based rival to the PlayStation 2 or Microsoft's not-so-secret X-Box? A games-oriented unit seems unlikely. While a Mac-based machine could be made that offers comparable performance to the Sony box – a PowerPC G4 and a Voodoo 5 should do the trick – the parlous lack of more than a few A-stream titles would seriously hinder its sales prospects, just as it did for Pippin.

## Wireless WebPad

Instead, we'd expect something more Net oriented, something to tie in with Apple's growing interest in the Internet as a revenue generator. Apple is already offering Macintosh users 20MB of online storage (iDisk), that could easily be expanded to allow diskless, TV-connected appliances to store bookmarks, game scores and save-states, and so on. Cutting out hardware like drives and a monitor could easily allow Apple to offer a cheap 'iMac Jr'.

Mac OS X's FreeBSD microkernel-based architecture makes it an ideal basis for a highly stable (if stereos and VCRs don't crash, neither can consumer electronics Net appliances), yet compact (store it in Flash RAM) appliance OS. Just add a cut-back Mac GUI and you're away.
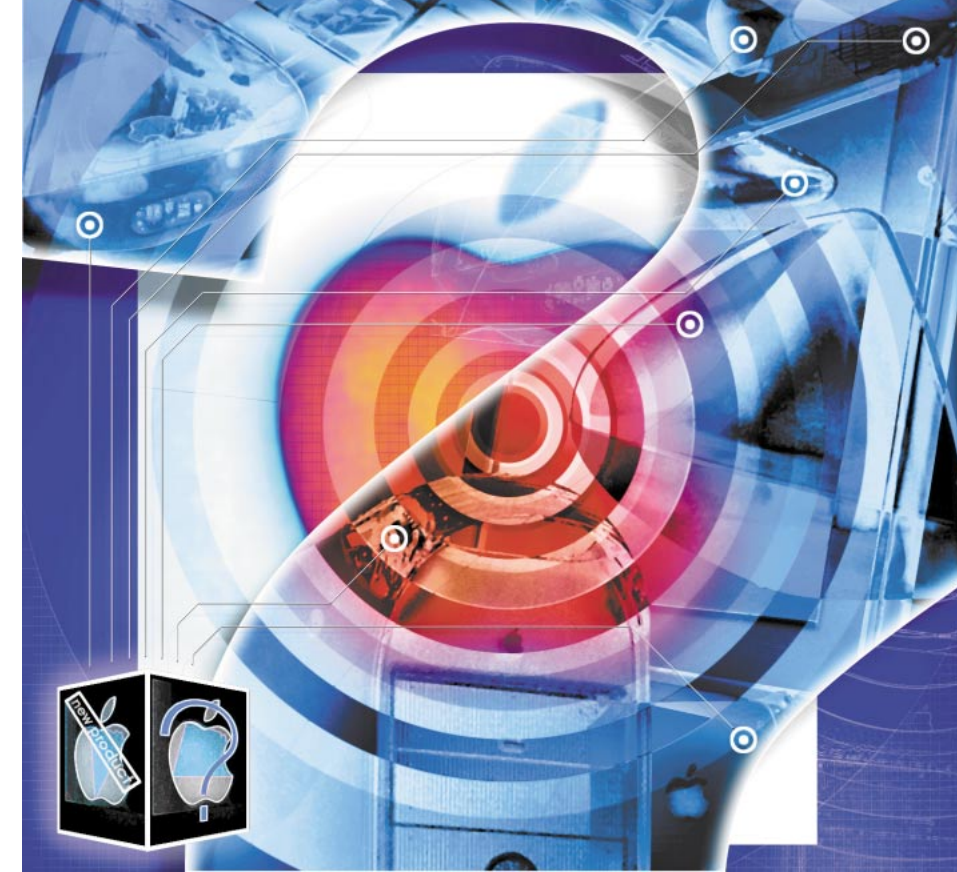
DAVID ANGEL

Oh, and an AirPort-connected wireless keyboard would finish it off very nicely, particularly if a built-in LCD allowed you to use it anywhere within your home – an Apple wireless WebPad, anyone?

Apple clearly has the motive and opportunity to execute an entry into the appliance market. It also has the branding and the desire to be seen as something more than a PC company. We'll have to wait and see whether it does the deed. Just pray we're not going to get another Pippin. **MW**

# Apple: Woz it all about

**Steve Wozniak, Apple's other co-founder, on Jobs, Microsoft and today's Macs**

Steve Wozniak (Woz) is one of the biggest names in Apple's history. A co-founder of Apple Computer, he originally worked with Steve Jobs and Ron Wayne creating the Apple I in the 1970s. His past has included stints in telephone-hacking ('phreaking'), computing and the music industry. He currently works with children, teaching computer classes for fifth through eighth graders in the Los Gatos, California, school district. His enthusiasm for how things work is infectious, and Californian children have been learning from him since 1990. He still receives a nominal $12,000 per year salary from Apple as 'Employee number one'.

Contributing Editor Jake Sargent caught up with him to talk about Steve Jobs, Apple's strategy, Mac OS X and more.

First Sargent asked Woz what he thought about the recent pay package (10 million share options, $40m jet) handed to his Apple co-founder – and current CEO – Steve Jobs.

"I think Steve's reward is in line with other such rewards when companies are pulled out of critical times – a CEO of a company the size of Apple should be generously compensated anyway. I believe that Gil Amelio took a lot of proper steps along the lines that Steve wanted, but I couldn't tell you if Apple would have been brave enough to come out with the iMac without Steve – although the risky eMate did come out before.

"I see strategies and directions that make sense. Apple has great products for today's business, and is positioning itself for a future in which a lot of what we have on our computers will be kept and done for us on the Internet. That's the trend and Apple will be there. We missed out on some important trends in the past."

"I have read some bad reports on how the company is run by Steve. It's disconcerting because I have to somewhat agree with what's being said. Often it's along the lines of Apple having atrocious customer support. They all make it seem like Steve is trying to take advantage of Macintosh owners, they

ALLIKOW

fall in with Steve's image; but in most cases I think it's more important to keep the company profitable and on track rather than try to do everything to keep the most customers possible happy. I think customer support is pretty bad these days.

"Looking back on my years with Steve, I remember days before computers, days of sharing an interest in Bob Dylan songs, days of riots and tear gas and phone phreaking in Berkeley. Chatting about all sorts of things while driving together.

"I also remember how Steve and Mike Markkula saw my computer as a vehicle to bring a properly packaged product to people, I cared about the Common Joe above all, but a refined view was essential."

Woz shared his opinion regarding Microsoft: "Microsoft used its monopoly position with Windows to gain a larger share of the browser market. An independent company (without Microsoft's advantages) could not have financed the development and free distribution of Explorer, nor could they have forced us to encounter it before Netscape's browsers. Microsoft claims it acted within the law. You have to ask yourself what that means, I see it as saying that some action could have put them outside the law. I read the entire 207-page finding of fact and can't imagine one more thing that Microsoft could have done with their Windows monopoly to gain ground for Explorer."

Despite this, Woz disagreed with breaking Microsoft up, favouring a more complex remedy. "Microsoft should be told to make available preferential placing with Windows of other categories of software and services, from independent manufacturers for approximately as long as things went the other way. This would stimulate the hundreds of companies that didn't get to be innovators because Microsoft had the power to keep them from success, or took the innovatory edge itself. That way any wrong effect will be equally undone."

For Woz, the jury is still out regarding Apple's future operating system. "Mac OS X seems like it might have simpler access to what I do the most, but I'm wary of saying I like the iDock", said Woz, "As Nicholas Negroponte, a strong advocate of user interfaces tailored to humans and a supporter of the Macintosh for this reason, points out, one can always find things quickly on their messy desk, but they are in trouble if a maid cleans it up. Still, I'm prepared to jump into Mac OS X early, on its release."

"I am very happy with OS 9, particularly its automatic software updates feature. I didn't find OS 9 overloaded with new features, or additional ways to do the same things. I hate such complexities. I'm always happier if an OS release concentrates on a few key items and bug fixes. Conflicts I'd experienced with Sherlock 1 disappeared with Sherlock 2. Though some dislike the Sherlock/DVD player/QuickTime look, I like them and find them easy to use. I particularly like the Sherlock channels." **MW**

*Apple air head*
*Woz uses a variety of different Apple computers, from his PowerBook G3/400 to the network of iMacs he uses to teach children.*

*"My favourite aspect of the new generation of Macs is AirPort. I didn't know at first how much I would like it. The first day I set one up and installed the software on my iBook, I was a convert. I have six iMacs and three G4s set up on a wireless LAN. After configuring and networking them I yanked out the ethernet hubs and just used the AirPort cards that I'd put in each one already.*

*"Today's Apple products are excellent for the professional, but I care a lot about the needs of 'normal' families, and I love the iMacs and iBooks for their ease of use."*

Contributing editor Jake Sargent runs the MacMind Web site (www.themacmind.com). Woz maintains a Web site at www.woz.org.

32 Macworld APRIL 2000 Macworld online For the information as it happens visit Macworld Online Daily News (www.macworld.co.uk), updated throughout the day

For the information as it happens visit Macworld Online Daily News (www.macworld.co.uk), updated throughout the day Macworld APRIL 2000 33

# business news

## Shares hit new high

Analyst Kevin McCarthy has forecast 1.05 billion unit-shipments during Apple's second quarter. He says the prediction is driven by strong PowerBook, iBook and G4 PowerPC sales, that pushed Apple's share values to a new high of more than $130 a share. Apple will report its second-quarter results on April 19. A $320 investment on March 11, 1999 would today be valued at $1,300.



# Paris is Euro hub

## Apple to consolidate on marketing and advertising

Apple is consolidating its European marketing operations, by running them from its European headquarters in Paris. Countries presently affected by the move include France, Germany, Austria, Switzerland and the UK. Italy, Sweden and the Netherlands are set to join the list of countries added to the central fold.

Regional sales teams remain in each of the countries, with general trans-national marketing planned and executed from the new headquarters. David Cockle, Apple's European business development manager said: "The US is geographically larger than Europe, but we don't have different marketing departments in each state."

Apple hopes that by pooling resources and cutting bureaucracy, cost savings can be passed on to regional sales teams in the form of marketing and advertising support that will be organized Europewide. Previously, such support was run on an ad hoc, country-by-country basis.

Apple's recent "Solutions for Video" roadshow was organized to tour several countries.

Cockle said: "The idea is to promote a series of events in the vertical markets, so we get the message right and get a feeling for, and feedback from our customers in different fields."

The new strategy promises more such focused events, aimed at professionals in particular markets.

Cockle said: "Even as we speak, the guys in the US are negotiating a series of Web-related events. The idea is to have a different theme each quarter. This quarter it's Final Cut Pro 1.2. Next, it'll be Web-authoring." **MW**
**Jonny Evans**

## Fraught Newer salvaged

PowerPC upgrade-card maker Newer Technology, and Singapore-based manufacturer, Tri-M, have gone into partnership, after tense negotiations throughout which Newer's future was under threat.

After facing bankruptcy earlier this year, Newer was forced to contact its creditors by post, requesting they sign a "forbearance agreement". This agreement entailed creditors agreeing that their debts be frozen for 12 months. With liabilities totalling $14 million, capital of $9 million and assets of only $5 million, this was the only way the company could avoid going to the wall.

In the letter to creditors, Newer chief operating officer John Nelson said: "We have not been the model of efficiency in taking care of our business."

Tri-M, one of Newer's major creditors, has now invested twice in the beleaguered upgrade company. Its support was conditional on Newer's

creditors signing the forbearance agreement, Tri-M taking seats on the Board of directors, and Newer using the investment cash to grow business, not pay its debts. Industry insiders doubted the company would survive.

The tension broke when, after intensive meetings, the company revealed that Tri-M and Newer were to become partners. Several Tri-M operatives then took seats on Newer's board of directors, including Gerald Minjoot, Tri-M's managing director.

Minjoot said: "Tri-M is delighted to combine its manufacturing capacity with Newer's expertise in innovation and product development."

Newer's Nelson said the recently-opened Web-based Newer Store (**www.newerstore.com**) is central to the company's future. Also crucial, at least in the short term, is the fate of the iMAXpowr G3 466. **MW**
**Jonny Evans**

## Business briefs

■ **Apple's streaming-media partner, Akamai, is to acquire streaming-audio and video-streaming company Intervu. A stock-for-stock transaction worth $2.8, the merger will create the largest streaming-media and content-delivery company on the Internet. It will have more than 3,000 servers in 100 networks across 40 countries.**

■ **Dragon Systems has suspended development of its NaturallySpeaking voice-recognition software for the Mac, pending release of the next Mac OS X Developer Edition. Company insiders say it is facing "unexpected challenges" developing the Mac version, caused by the different ways Macs and PCs handle memory.**

■ **PC sales in Europe climbed 18 per cent in 1999, reaching 29.9 million units, according the Gartner Group's Dataquest unit. The climb is due to new markets such as Spain and Greece. The UK shipped 5.5 million units in 1999, up 25.2 per cent on the 1998 figure, Dataquest also revealed.**

■ **EarthLink – Apple's favoured Internet service provider (ISP) – and MindSpring have merged, making EarthLink the number two US ISP. The merger consolidates EarthLink's position in the narrow- and broadband Web-hosting and e-commerce markets in the US.**

■ **ATI Technologies – the 3D graphics/video acceleration and multimedia-solutions manufacturer – has bought ArtX for $400 million. ArtX develops high-performance graphics for PCs and consumer appliances.**

■ **Apple has sold a further seven per cent holding in UK-based firm, ARM Technologies. ARM manufactured the StrongARM processor for Apple's Newton Message Pad. Apple now owns 4.9 per cent of ARM.**

■ **Corel has merged with Inprise/Borland, in a deal worth $2.44 billion. The worldwide firm will have one of the largest Linux teams.**

# product
# news

# Less is more with VST FireWire RAID

**V**ST Technologies took the wraps off its portable 100GB FireWire RAID solution for the Mac at Macworld Expo, Tokyo 2000. VST claims its product to be the world's smallest high-performance RAID (redundant array of independent disks) system.

It measures 130-x-180-x-250mm and includes custom hardware and software that lets multiple FireWire hard-drives work together as a high-performance RAID array – offering striping, mirroring and HFS volumes simultaneously.

Striping is a high-bandwidth means of streaming data to and from multiple drives simultaneously. Mirroring offers an identical, redundant copy of the volumes' data on two drives in the array, so a single drive failure will not cause any lost data.

The VST FireRAID Array takes four 25GB hard drives, giving maximum storage of 100GB per array, and up to 16 array towers can be connected together, with a data throughput between 30-40MB per second.

It includes a built-in battery backup, capable of running the array for up to two hours without AC power in the event of a power cut.
**Computer 2000, 01256 847032.**

*Sting RAID*
*The VST FireRAID Array takes four 25GB hard drives, giving storage of 100GB per array.*

### RapidFire blows hot
Powerlogix has released the RapidFire FireWire USB multi-function PCI card. The card includes three FireWire ports and two USB ports. Its ideal for older Macs that need an upgrade to keep pace with the latest peripherals. The card supports most brands of older Macs, and requires System 8.6 or better. It costs £135.
**IMC, 01344 871 329**

### PCI card in ports double
Orange Micro has also released a half-size (seven inches) PCI card with two USB and two FireWire ports. The ports reach 400Mb per second and draw power from the PCI bus of the host system. The package includes two software packages that connect DV camcorders to the FireWire ports. The card costs £129.
**AM Micro, 01392 426 473**

### Mozilla hits alpha stage
Mozilla.org, started-up by Netscape Communications to develop the core technology behind its next browser, has brought the Mozilla browser to the alpha stage. It features the standards-compliant Gecko rendering-engine, Navigator functionality, a mail and news client, and a WYSIWYG Web-page editor. It is being ported to Mac OS X and is available for download.
**Mozilla, http://mozilla.org/**

### iMac trolley wheeled in
UK-based System 180's new iMac trolley is based on its modular System 180 product. The galvanized steel trolley has a lower steel-shelf and upper wooden laminated work surface. It comes in the iMac flavours and costs £198.
**System 180, 020 8748 6200**

## Media Cleaner Power Suite upgrade

**M**edia 100 has upgraded Media Cleaner Power Suite – its video-compression software – to Version 4.0.2. The new version has increased speeds for preparing streaming media.

Media Cleaner Power Suite is hardware-accelerated to compress Sorenson video, meaning digital video or Web producers can encode QuickTime content up to tens times faster. The upgrade, which is free to registered users, is now compatible with all G4 Power Macs.

Media Cleaner Power Suite is compatible with Media 100, Adobe Premiere, Edit DV, Final Cut Pro, and also embraces OMF import for optimal integration with Avid Systems.
Media 100, 01344 411 001

## Hansol launches CRT

Hansol's new flat-screen shadow-mask 17-inch CRT monitor has been launched, priced at £179. The 710D uses a Dynaflat tube for sharp images, and the flat screen reduces reflections. The monitor has an optimum resolution of 1,280-x-1,024 pixels at a refresh rate of 85Hz; and can reach 1,600-x-1,200 at 75Hz. It has a viewable area of 16 inches and a dot pitch of 0.25mm. The on-screen display menu is in five languages.
**Hansol, 01252 360 400**

## Secret is safe with Voget

Voget Selbach Enterprises has released VSE My Privacy, a shareware application that lets Macintosh users store and organize confidential data in an easy to use 448-bit encrypted database. The database can be opened from within applications with a single mouse-click. Because it's a German product, VSE My Privacy does not suffer from US export restrictions. The full licence is £12.50, and a demo is on this month's *Macworld* cover CD.
**Voget, www.vse-online.com**

## New faces are Grotesk

A new set of typefaces has been released by FontFont. The Millennium release includes Super Grotesk and a new family of fonts called Beekman, that can be distorted horizontally as well as vertically without "losing face".
**Faces, 01276 388 88**

## Power lights the way

MGE has announced a range of USB- compatible uninterruptible power supplies (UPS). The Pulsar Ellipse UPSs use small high-frequency transformers that reduce the footprint. They provide protection for data lines via a data-line protection port, eliminating over-voltages and disturbances transmitted over faxes, modems or networks.
**MGE, 0181 861 4040**

# Digital camera trio thrill


*Pixel fix-all*
*FinePix 4700 Zoom delivers a 4.3 million-pixel image file.*

Three digital cameras have been unveiled this month, from Fujifilm and Minolta. Fujifilm has announced the first consumer and professional digital cameras to use the company's groundbreaking Super CCD Technology. (See *Macworld*, January 2000).

Fujifilm's consumer model, the FinePix 4700 Zoom, delivers a 4.3 million-pixel image file (2,400-x-1,800 pixel-resolution), while the professional FinePix S1 Pro offers an image file with 6.1 million pixels (3,040-x-2016 pixels).

The high image resolutions are a result of Fujifilm's Super CCD Technology. Super CCD has larger, octagonal-shaped photodiodes, arranged at 45-degree angles. This increases sensitivity, improves signal-to-noise ratio and offers a wider dynamic range, according to Fujifilm.

The FinePix 4700 Zoom, also offers shutter speeds from 1/2,000 of a second to three seconds, an adjustable ISO sensitivity from 200 to 800, and a 3.7x optical zoom. The FinePix S1 Pro has four shooting modes, five exposure modes and five program modes. Both cameras are USB-compatible and ship with 16MB SmartMedia storage card. The FinePix 4700 Zoom ships in April with a price tag of £595, while the Pro camera will be available in July, priced at £2,500.

Meanwhile, Minolta has introduced the Dimâge 2300. Priced at under £400, the 2300 is a pocket-sized autofocus camera, with an all-glass aspheric lens, USB connection, digital zoom and macro capability. It offers exposure compensation, manual selection of pre-set white balance modes and flash mode options. Digital Zoom records images at 1.4x or 2x zoom, and the macro allows close-up shooting to 30cm.

The 2300 uses JPEG and TIFF file formats – compressed images are saved in Fine, Standard or Economy quality modes. Other features include the remote shutter release when used with the optional IR Remote Control RC-3, and a Burst Capture mode with a 2fps burst rate.

The Dimâge 2300 ships with camera case and hand strap, video and USB cables, batteries, CompactFlash card, and MGI's PhotoSuite SE retouching software.
**Minolta, 0800 374 481**
**Fujifilm, 0171 586 5900**


*Loads of modes*
*The FinePix S1 Pro has four shooting modes, five exposure modes and five program modes.*


*Drive time*
*The pocket-sized Dimâge 2300 has an all-glass aspheric lens.*

# Philips Plasma is view of the future

Philips has released its new range of monitors, including CRT models and the Philips Brilliance 420P Plasma monitor.

All are Mac-compatible, but require a third-party adaptor. The high-end Brilliance 420P Plasma (pictured right) has a flat-screen and a top resolution of 1,024-x-768 pixels, a screen size of 42 inches and a refresh rate of 50x per second.

On-screen images are viewable from angles of up to 160 degrees. The built-in sound system has six 40W speakers. UK pricing was unavailable.

The new Real Flat CRT monitors are the 107P, 109P (pictured below), and 201P, whose screen sizes measure 17, 19 and 21 inches respectively. They use Image Clear Enhancement (ICE) technology, reducing distortion of both text and graphics. ICE offers excellent uniform-focus, and automatic or manual correction of convergence and purity errors caused by changing magnetic fields, temperature or current fluctuations. All have auto-calibration and CustoMax monitor-control software that is operated via the mouse.
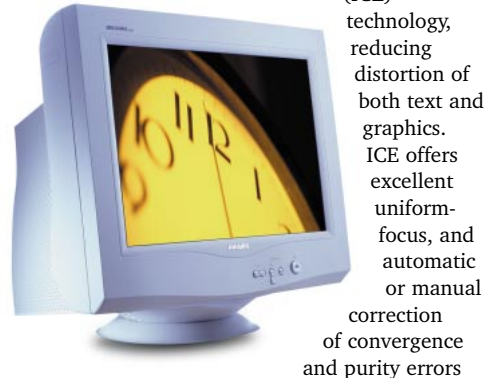
The £335 107P offers a frequency of 96KHz and maximum resolution of 1,920-x-1,440 pixels. The 110KHz 109P offers a maximum resolution of 1,920-x-1,440 pixels and costs £439. The £849 201P offers a frequency of 121KHz and a maximum resolution of 2,048-x-1,536 pixels.

All three models feature a newly designed, space-saving casing.
**Philips, 0208 689 4444**



# FireWire first for LaCie

LaCie has released the DVD-RAM52i, the first DVD-RAM drive to be fitted with a FireWire interface. It's a hot-swappable machine, can handle high-speed file-transfers and can be daisy-chained.

Built to accommodate DVD-RAM media, the drive can read any 12cm optical media, including CDs, DVD-ROM and DVD-RAM discs. Media written by DVD-RAM is readable by DVD-ROM 6x drives and will be recognized by domestic DVD-video players from 2001. DVD-RAM cartridges have a life-expectancy of 30 years and have a 5.2GB capacity.

The drive is £479, while the DVD-RAM 52s SCSI is £469. The 2.6GB single-sided DVD-RAM discs cost £15 each, and the 5.2GB double-sided DVD-RAM discs are £24.
**LaCie, 0207 872 8000**



## Hansol launches low-end 19-inch CRT

Hansol has launched the 19-inch £225 910A. The CRT monitor has a maximum resolution of 1,280-x-1,024 pixels at 85Hz and has a dot-pitch of 0.26mm. It has a screen-area of 18 inches and the button-controlled on-screen functions are available in five languages. The monitor comes with a three-year on-site warranty.
Hansol, 01252 360 400


Quite RGBGone
Click Convert to change all RGB colours to CMYK, or Setup to change options.
Setup... ? ?? Cancel Convert
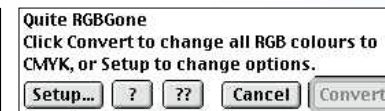
## Production bundle

Callas and Quite software are shipping a bundle of PDF Output Pro and RGBGone (above). PDF Output Pro separates PDF files to any PostScript device. RGBGone converts RGB colours to CMYK in PDF files. The bundle costs £249. Callas software has also released v.2.5 of FontIncluder Pro Server, its industry-standard application for embedding fonts in EPS and PostScript files. It features faster processing of files and folders Its a free upgrade for v.2 users.
**Page & Press, 020 8575 3344**

## Slide-adaptor first

SlideScan is the first universal adaptor for flatbed scanners. It scans and digitizes 35mm and 6cm slides or negatives using a conventional flatbed scanner. No installation, cables or software are required. The unit costs £59, contains a light meter, and can be calibrated to work with most flatbed scanners.
**MegaPixels.com, 0800 028 2261**

## Graphics tint

Tintmaster publications has released a new edition of Tint File, the reference source for graphic designers. The new edition adds to the previous edition's range of CMYK colours. The file now contains over 1,700 colour combinations, giving users the chance to choose accurate tint percentages.
It costs £89.
**Tintmaster Publications, 01446 730 630**

## Belkin's FireWire move

The Belkin FirePath PCI card lets users of older Macs add FireWire capability. The PCI card offers three 400Mbps FireWire ports, and also includes MGI Video Wave III SE software that lets you edit imported video. FirePath cables work with all FireWire-compatible devices. Belkin's FirePath costs £89.95, and is available from all major outlets.
**Belkin, www.belkin.com**

38 Macworld APRIL 2000 Macworld online

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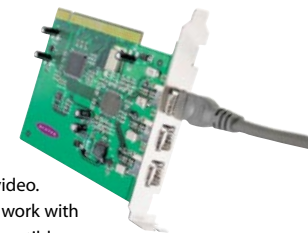
## CDs and books



**Pharaoh enough**
Montparnasse Multimedia has released Egypt, Voyage to the Land of the Pharaohs, as a £25.50 reference resource for students of all things Egyptian. Users can access Egyptian civilization, from pre-history to the present day, via images of arts and artefacts. Movie clips and literary extracts are also included.
**Montparnasse Multimedia, (33) 1 40 07 87 40**

**Plain and simple Web**
Rough Guides' Internet 2000 is a plainly written Web companion, covering everything from making the first connection to creating Web pages. It also features reviews of 2,000 Web sites. It costs £6 from High Street bookshops.
**Rough Guides, 0171 556 5001**
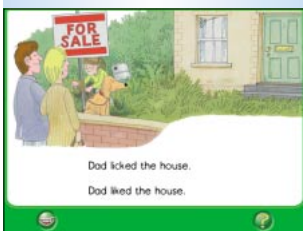


**Learning the Tree Rs**
Sherston Software and Oxford University Press have released the Oxford Reading Tree Talking Stories Stage 4 (above). It's an Interactive teaching resource aimed at Key Stage 1 and costs £40.
**Sherston Software, 01666 843 200**

**Train of thought**
The Virtual Training Company (VTC) has launched a range of software CD-ROMs. These cover many new applications, including Adobe InDesign, CorelDRAW! 9, Director 7, Poser 3 and Flash 4.0. The titles cost £79.95 each.
**Marrutt Digital, 01825 764 057**

# Epson reels off poster printer

**E**pson has announced the wide-body Stylus Pro 7000. Aimed at the pro-market, the six-colour, high-resolution machine is suited equally to proofing-level printing or point-of-sale reproduction for large photos and posters.

Available in a desktop or stand-up version, the machine offers an automatic paper cutter, roll-fed paper, and can handle sheets of board of up to a thickness of 1.5mm.

The Stylus Pro 7000 can print up to five metres per hour, and has variable speeds for variable outputs.

Based on the Stylus Pro 5000 Micro Piezo printhead, the printer offers 1,440dpi in six colours, as well as Adobe PostScript ability. Its bi-directional high-resolution printing gives a print speed of up to 6m$^2$/hour. This makes use of its upgraded printer drivers, allowing faster print speeds and high-quality output.

The printer also offers immediate drying, using Epson's Quick-Dry ink formulation. It will be available in the UK from April. Pricing has not yet been announced.
**Epson, 0800 220 546**



*A real pro*
*The Stylus Pro 7000 offers 1,440dpi resolution in six colours.*

# CD-RW drives at double

**L**aCie's latest offering is a 12x4x32x CD-RW (below, left), featuring Sanyo's "BURN-Proof" (Buffer Under RuN) technology. This eliminates the problem of buffer underruns – when the Mac is unable to provide data to the CD-R/RW buffer in time to write it. This ensures error-free recording at 12 speeds, even when lower-performance Macs are used, according to LaCie.

The SCSI-2 drive writes a 650MB CD in six minutes, when in 12x CD-R mode. The drive can also write/rewrite CD-RW media at 4x speed.

Three versions are available; an internal drive costing £279, an external BlueCD casing model for £299, and an external stöhl metal casing for £329. All models ship with one rewritable disc, and Toast 3.8 and DirectCD software.
LaCie, 0171 872 8000

■ Iomega has released the £195 USB-based ZipCD, an external CD-RW unit (below, right). Housed in a sleek blue casing, the ZipCD offers a speed of 4x4x6 and is bundled with software from Adaptec, including Toast, Easy CD Creator and Direct CD. It will ship in the UK in spring.
Iomega, 0353 1807 5133

**Double take**
*Microtek has unveiled the high-end Artixscan 1100 (above right) and the entry-level ScanMaker 3600 (above left).*

# Microtek bookends its scanners range

**M**icrotek has released two scanners – the low-end ScanMaker 3600 and the professional-level Artixscan 1100.

The £79 ScanMaker 3600 is an entry-level, 600-x-1,200 dpi, high-res, 42-bit scanner. It uses Microtek's proprietary Dual Optimization Technology, which allows an image to be sampled at 42 bits per pixel, and then optimized twice to remove image noise – giving more accurate colour fidelity.

The 3600 comes with image-editing, scanning and OCR software and is USB-based. The scans are controlled by ScanWizard 5, which offers both learner-level and advanced control features. Also bundled is Adobe PhotoDeluxe image-editing software, Caere PageKeeper document-management software, Ulead PhotoImpact Full and Caere OmniPage LE OCR software.

Microtek's £1,349 Artixscan 1100 is a 42-bit colour depth flatbed scanner. It offers a 1,000-x-2,000-dpi resolution. The 1100 uses Microtek's patented EDIT (Emulsion Direct Imaging Technology).

The scanner's dual-media design lets users place transparent media into specially designed glassless film holders that snap onto a plate and then slide into the scanner. The lack of glass in the holder gives crisp scans.

Colour control is kept consistent with ICC Profiler software, powered by Kodak's colour-matching system. Artixscan comes with ScanWizard Pro – Microtek's professional pre-press software.

LaserSoft's Silverfast is included, letting users scan to CMYK, RGB or CIE-lab colour files.
**Johnsons Photopia, 01782 753300**

# PowerBook wireless boon

**P**owerBook users seeking a fast wireless solution can now opt for Farallon's 11Mbps cross-platform wireless PC card. The card has a range of 150 feet and is compatible with multiple networking-protocols, including TCP/IP, IPX and Apple Talk.

It can also communicate with all wireless devices and industry access-points that adhere to the 802.11 industry standard.

The SkyLine11Mbps features 40-bit WEP

(Wired Equivalent Protection) encryption support for data security.

The card automatically steps down from 11Mbps to 5.5Mbps, 2Mbps and 1Mbps when users move away from the access point to ensure maximum range.

The card works with Apple's AirPort technology with a Type II PCMCIA slot. Shipping in April, the SkyLINE 11Mbps will be available for £230.
**Computers Unlimited, 020 8358 5857**
**Softline Distribution, 01372 726333**

## Mind your language

Ultra Lingua, provider of dictionary software has announced its French-to-English product. This contains nearly 250,000 words, over 100,000 translations, tens of thousand secondary entries, and slang and technical terms. It has a reverse-translation feature, which shows how choices translate back to the departure language. You can also drag-&-drop words between Ultra Lingua and other apps, and the software has a grammar reference library – all on very little memory. It costs $25 to register.
**Ultra Lingua, www.ultralingua.com**

## List we forget

Vertical solutions has released version 1.1 of Simple To Do, a list manager for making to-do lists, managing small projects and outlines and for general organizing. The software has a number of handy features to help you manage projects and time. Shareware registration fee is $25.
**Vertical Solutions**
**www.simpletodo.com**

## NetShred of evidence

NetShred 1.3, the browser- and email-cache destroyer has added support for Netscape profiles and the AOL version of Internet Explorer 4.5. It also offers a log facility that logs which locations are searched and which files are shredded. The full version costs $10.
**NetShred, www.arccom.bc.ca/**

## Software takes strain

Publicspace dot net has announced MacBreakZ 2.1, a personal ergonomic assistant which monitors keyboard and mouse activity and helps avoid RSI and computer-related injuries. The update can be configured to the needs of individual users. It costs $25.
**MacBreakZ,**
**www.publicspace.net/MacBreakZ/**

# No lounging on Voodoo upgrades

**T**he next-generation Voodoo 4 and 5 graphics accelerator cards for the Mac – based on the new VSA-100 processor – have been launched by 3dfx. Both models have pro and consumer versions.

This advanced 3D engine supports the integration of one-to-32 chips per system, delivering fast fill-rates and substantially improved 3D rendering, with advanced full-scene anti-aliasing technology at real-time frame rates.

The consumer products (the Voodoo 4 consumer version is pictured above) are based on the VSA-100 processor and deliver fill-rates of up to 1.47 gigapixels per second. They carry 16-128MB dedicated video-memory and from one to four processors per board.
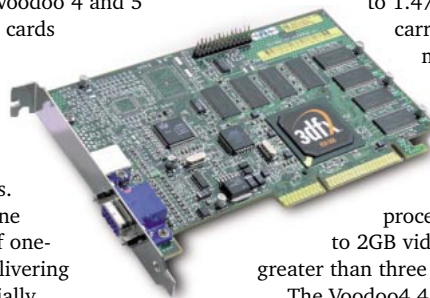
Professional-level cards offer more advanced features, including from eight-to-32 VSA-100 processors and 128MB to 2GB video memory, attaining fill-rates greater than three gigapixels per second.

The Voodoo4 4500, Voodoo5 5000 and Voodoo5 5500 will be available this spring. Prices are yet to be announced.

3dfx has also launched a Web site specifically to serve its European customers. It can be found at **www.europe.3dfx.com.**
**Ingram Micro, 01908 260427**

# Double Vision Masters...

**i**iyama is rolling out two additions to its Vision Master range of monitors. The 17-inch and 19-inch CRT monitors use microfilter technology, which provides better colour reproduction and higher brightness and contrast than standard CRT technology, according to iiyama.

The £229 Vision Master 404 and the £345 Vision Master 450 (pictured right) models are designed to complement multimedia applications. Touchscreen versions are also available.

The Vision Master 404 has a 17-inch microfilter FST (flatter squarer tube), with a 0.26 dot-pitch aperture-grille, 96KHz horizontal sync and 160MHz bandwidth. This offers a maximum resolution of 1,600-x-1,200 pixels at 75Hz and 1,200-x-1025 pixels at a refresh rate of 90Hz.

The 19-inch Vision Master 451, has 115KHz horizontal sync and a 300MHz bandwidth, that provides resolutions of 1,800-1,440 pixels at 75Hz and 1,600-x-1,200 pixels at 85Hz. USB and speaker hubs are available for both models.
iiyama, 01438 745 482

# Multiprocessing takes step forward

**X**LR8 brought the multi-processing Macintosh a step closer, when it displayed its long-awaited multiprocessor upgrade for G3 and G4 PowerPCs at Macworld Expo, Tokyo.

Based on XLR8's CarrierZIF concept, the upgrade is effectively an accelerator card that accommodates two processors working in tandem.

Technically, it takes the form of a dual-ZIF CPU riser card that accommodates the chips.

Though not yet available, the company is operating a "buy now, upgrade later" plan. The company says that its multiprocessing solution will be available in "mid-summer".
**Interex, 01525 377 551**

## David Fanning

Company and personal Web-domain names are being snapped up by cash-hungry Net prospectors.

# myname.gone

**W**hat can be more personal than a name? My name, David Fanning, is not the finest name ever. It's great for school wisecracks, hilarious for deaf telephone receptionists or obnoxious customer service reps (What? Fanny? Ha, ha, ha!). But no matter how dumb your name – and I know people with dumber names than mine – you eventually grow into it. I remember reading a survey about Wankers in Germany, and how many of them are happy with their names. Even though the English meaning is well known in Germany, only a tiny percentage of German Wankers elected to change their names. The more preposterous your name the more personal it is – and the more attached you become. After years of teasing at school, things can only get better.

With all this in mind, I experienced mixed feelings the other day – when I received an email congratulating me on registering davidfanning.co.uk. First of all, I hadn't done anything of the sort. The prospect of somebody hijacking my name was a bit unsettling, but I soon realised it was a PR stunt and am now glad that it *is* me that owns it – rather than the Irish DJ or the American documentary director who both share my name. The company involved is called ItsBob.com, and it's advocating that people claim their names as dot.coms before somebody else does. On the one hand, this smacks of "cyber squatting" – a kind of domain-name futures market, where one guesses what people will want for a domain name before they do; and then charge them for the privilege of using it when they try to register. On the other hand, why let somebody else register your own name: get in there first to protect what is yours.

When I was assured that ItsBob.com meant no harm and only wanted to attract my attention, I got to thinking about the availability of davidfanning.com.

One quick search of the Web later, and I learned that the domain already exists. It's not the US director, or even the Irish DJ, but – horror of horrors – a realtor (estate agent to you and me) in San Diego. All right, so it's his name too, but it feels odd having something that is mine owned by a Californian house hustler – but not so odd that I'd make him a million-dollar offer to reclaim my name.

So where is this prospecting going to lead the Internet? There's going to be a drought of decent names within the next few years – evidence for which already exists. In London, advertising for BigBlueDog.com – a recruitment company set up by the *Evening Standard* newspaper – is currently plastered across the capital. Big blue dogs are easier to remember and register than more obvious names – like jobsearch.com or jobseeker.com. I guess eventually even the daft-but-memorable names will be used up, and we'll have to resort to made-up words, like dobedo.com and g-wizz.com. But how far can this go before things like qwerty.com is used. Forget it. I just checked the Net – qwerty.com is already in use.

The point of a domain name is that it's easier to remember than a 12-digit IP address. At the rate of expansion of local telephone numbers – soon to be 11 digits for a London number – perhaps IP addresses will become easier to recall than domain names. Perhaps we'll see easy-to-remember IP numbers up for auction. How much for 123.456.789.101?

In the opposite direction, some registrars are now offering extended-length domain names, of up to 63 characters. Among the domains registered in this latest gold rush include: NationalBasketballAssociation.com, InternationalBusinessMachines.com and Microsoft's slogan wheredoyouwanttogotoday.com. Previously, .com domains were limited to 22 characters, and many big corporations are going to be caught with their Web pants down. Any Web site can now be comprised of an entire phrase instead of a single name. So, as soon as you hear a snappy new slogan or soundbite, you can be sure a Cyber Squatter is going to register it.

The thought of somebody else using your identity on the Web is slightly uncomfortable. It's a bit like someone borrowing your underpants. Perhaps if you're a John Smith you'll be less interested, because your Web homestead will have been the first to go. In fact, it was snapped up by a another US realtor. But by registering your own name, you join the ranks of Cyber Squatters: digital crusties making other people miserable because there is no law against it. It's not an easy decision, and I don't feel especially proud that I own davidfanning.co.uk. In fact, if there's another David Fanning that thinks he is more deserving of the domain, let me know and I may pass it on. Just email me at *givememynamebackyoubastard@davidfanning.co.uk*. **MW**
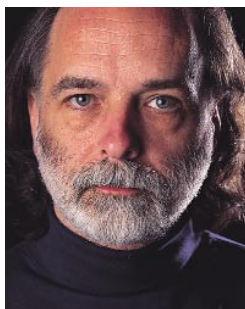
## Michael Prochak

Best-practice companies are usually the ones lacking direction, identity and ideas.

# Facing best reality

**M**aybe the long, sad-infested winter dark has worn down any semblance of tolerance that I used to have, but lately, I've been preoccupied with mind-numbing work-related trivia. The other day I spent hours desperately figuring out why kamikaze pilots wore helmets. Then I found myself pondering whether or not illiterate people get the full effect of alphabet soup.

I suppose one of the few advantages of being illiterate is that you're spared the constant barrage of weasel words that permeate most aspects of modern existence. You know what I mean; all that curious and loathsome cant affected by the likes of accountants, management consultants, politicians, and IT professionals – who seem bent on corrupting the Queen's English with their arcane drivel and bureaucratic patois. When anyone uses words like 'proactive', and 'bench-marking' I feel like ripping their tongues out.

Most of these weasel words, phrases and acronyms are the smoke and mirrors people use to try to make themselves feel special, to exclude others, or to mask the fact that their jobs or businesses have as much relevance as the proverbial emperor's new clothes. I do have to admit, though, that I too have used some of these vile words. But only in jest, you understand.

These trains of thought have their roots in a project that I've been working on for the past few months. It's supposed to be identifying IT 'best practice' in a business context. The idea is that, if a business does something particularly clever or innovative with its IT that saves money, streamlines operations, or makes the business more successful, then this can be held up as a shining beacon to other businesses with similar problems – so that they too can become more successful. At least, that's the theory.

Despite the fact that this and other vogue practices, such as benchmarking and business-process-reengineering (redundancies to you and me) have, at least according to the Butler Group, been totally discredited. Nowadays we find almost everyone in the IT industry using the term "best practice", as though it contains some deep-hidden meaning that the rest of us must remain ignorant of. To suggest that best practice might actually mean the same as "me too" must surely be a blasphemy on the scale of *The Satanic Verses*. To begin with, .coms, e-commerce and a lot of other new-media industries haven't been around long enough to develop best-practice models. And besides, the notion that a company will willingly tell the rest of the world how it has dealt with a difficult problem and gained competitive advantage is naive to the extreme. As the Butler Group suggests, what we're much more likely to find is collusion between a corporation's management and an external agency, such as a management consultancy, service provider or technology provider – with the aim of whipping up more business from those eager to follow best practice.

Like everything else in this industry, POV – that's 'point-of-view' to you lot – is everything. For example, Apple recently unveiled four of its first new, cool Internet-based services, known collectively as iTools. These inaugural iTools and their companion services, iCards and iReview, give a glimpse of the potential ways services will change the way we will use personal computers. This is best practice. Others should look and learn.

On the other hand, Microsoft, which is preparing to release Windows 2000, has been more restrained in talking about future services for its clients because the Justice Department is still breathing down its neck, and the EC is also now watching for more shenanigans that appear to take unfair advantage of the Windows monopoly. This is not best practice. This is bad practice. OK, taking unfair advantage may be exactly what Apple's new services are all about – but, hey ... they're being proactive here, and in any case, this is the sort of thing one needs to discuss off-line.

Wanting to be somebody is admirable, but perhaps we should all be more specific. For kamikaze pilots, wearing helmets was best practice, because getting shot in the head before they could kill others had a serious impact on output and performance. It took me ages to figure that out. Strangely enough, the end-result was still the same.

Unfortunately, these days most attempts to inject best practice or any other buzz-word-fix are usually carried out only by companies with no clear direction or strategy of their own – or where it could never make them competitive anyway. In a digital world, where the only certainty is that everything is uncertain, what is broadcast as best practice is almost certainly not worth knowing about.

And, like this sentence, that's the bottom-line. **MW**

# reviews

## Multimedia authoring

## Director 8 Shockwave Studio

**Publisher:** Macromedia
**www.macromedia.com**
**Distributor:** Computers Unlimited
(0181 358 5857)
**Pros:** Great workflow improvements; advanced Shockwave delivery.
**Cons:** Lack of new features.
**Price:** Studio, £799; upgrade from version, 7 £279; upgrade from versions 5, 6, and 6.5, £349 (all excluding VAT).
**Star Rating: ★★★★/8.2**

**D**irector 8 (D8) has been released less than a year after Director 7 (D7) defined a quantum leap in the evolution of the leading multimedia-authoring tool. D8 doesn't make the giant leap made by D7, but offers some productivity benefits that will certainly please the serious developer. However, there's not much you can do with Director 8 that you couldn't do with the previous version.

Director is now, first and foremost, an Internet-content creation tool, with Web-based download of Shockwave movies the primary means of delivery. Of course, this doesn't mean that Director can't be used for CD-ROM development, or multimedia presentations, as before. But it's the Web – and its changing nature as a maturing medium – that's driving Macromedia's development of Director.
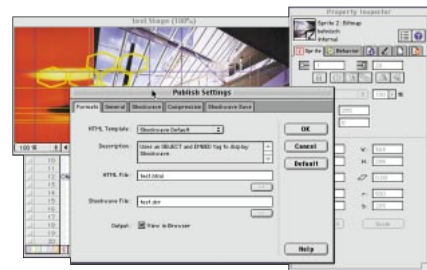


**Shocking**
The Save As Shockwave command has been renamed Publish.
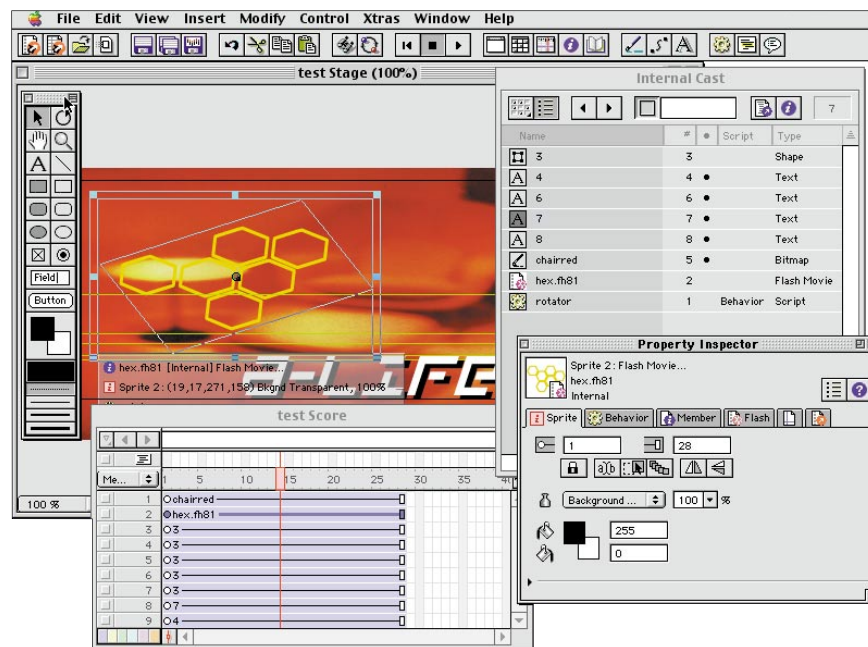


**On-screen credit**
Director 8 features a full on-screen cast list, held in a palette, so it's easy to see what's been used.

The Shockwave Studio comes with Director 8, Fireworks 3, Shockwave Multiuser 2, Shockwave Player 8, and the sound-editing application, Peak LE.

Fireworks 3 has already been reviewed here (see *Macworld* December 1999), so I'll concentrate on the other components.

First, Director itself. Almost every aspect of the interface has undergone change, which makes it a more unified application, easier to learn, and more in line with other Macromedia apps.

The major change in usability comes with the addition of the Property Inspector – a tabbed palette that shows, sees, and sets the properties of a sprite, cast member, script and movie – doing away with the floating dialogue boxes that beset previous incarnations.

### Learning the Lingo
Common properties of multiple sprites can be set simultaneously. Property Inspector allows for toggling between a dialogue view – that uses check boxes and other user-friendly devices to set the properties – and a list view, that displays properties by Lingo names, with numerical values. Experienced users will find this feature a great time-saver. Either mode provides a more coherent way of understanding and modifying a movie.

Developers accustomed to the old way of working will still find many of the old dialogue boxes and menu options, easing the transition between old and new.

The Cast window has also received much-needed refinement. While the old-style thumbnail view is still present, you can also toggle to a list view, displaying cast-member names, media types, creation dates, and comments as columns in a table.

Clicking on the column head sorts the table. Given that Director now supports up to 32,000 cast members, and about ten different media types, better asset-management was long overdue.

Some of the most useful interface enhancements come in the Stage, the area of the screen where the movie is shown.

Also welcome in D8 are grids and guides, that will be familiar to FreeHand or Fireworks users. The align feature now allows you to distribute a group of sprites evenly onscreen.  You can now also scale the stage, to zoom-in for extra precision, or zoom-out to save screen space. This feature, along with the Cast List option, and the Property Inspector, makes Director 8 less of a two-screen sprawler than previous versions.

Director 7 added Javascript-style dot syntax to Lingo for serious coders, and D8 continues this development of Lingo as

a fully-fledged programming language. It allows scripts to be saved and edited in an external application such as BBEdit, or a source-control environment, such as Microsoft Visual Source Safe. However, I know of no such application for Macintosh developers.

While the ability to edit Lingo scripts outside of Director is a nice touch, I can't see many benefits – apart from large companies being able to work with multiple developers on projects, and without a stand-alone Lingo compiler with which to test scripts.

### Sounds good
One feature sure to find widespread use is D8's improved sound control, which allows greater control and synchronization of multiple sounds – including the ability to pan sounds from left to right. A number of new drag-&-drop behaviours make it easy to control and sync sounds. This will make Director even more appealing for those involved in the construction of sound toys, virtual mixing decks, and audio jukeboxes.

The predominance of Shockwave as the primary delivery mechanism is emphasized by the Save as Shockwave command being renamed Publish. It offers a number of different Publish settings, defining whether a Java version is exported, or whether the HTML embedded code is included. A Preview in Browser feature resembles that of Fireworks or Dreamweaver.

A couple of advances in Shockwave will provide a number of benefits to developers. The first of these is called Runtime Lingo – transition effects that are controlled by Lingo, and can be applied to individual sprites. These can be used to create complex graphics from a number of simple components – the idea being to save bandwidth. Another bandwidth-saver is the option to convert all bitmap graphics to JPEGs, and apply compression options.

Shockwave movies are now scaleable – meaning they can be embedded into the full width of a Web page, regardless of how big the browser is, by specifying percentages. However, unless the movie is fully composed of vector sprites or Flash Assets, the need to avoid stretched bitmaps make it of little use to most developers.

Perhaps the strongest new feature of the Shockwave Studio is not Director, but the updated Multiuser Server 2. In case you haven't discovered this tool yet, it's a server-based component that allows multiple users to use a Shockwave movie
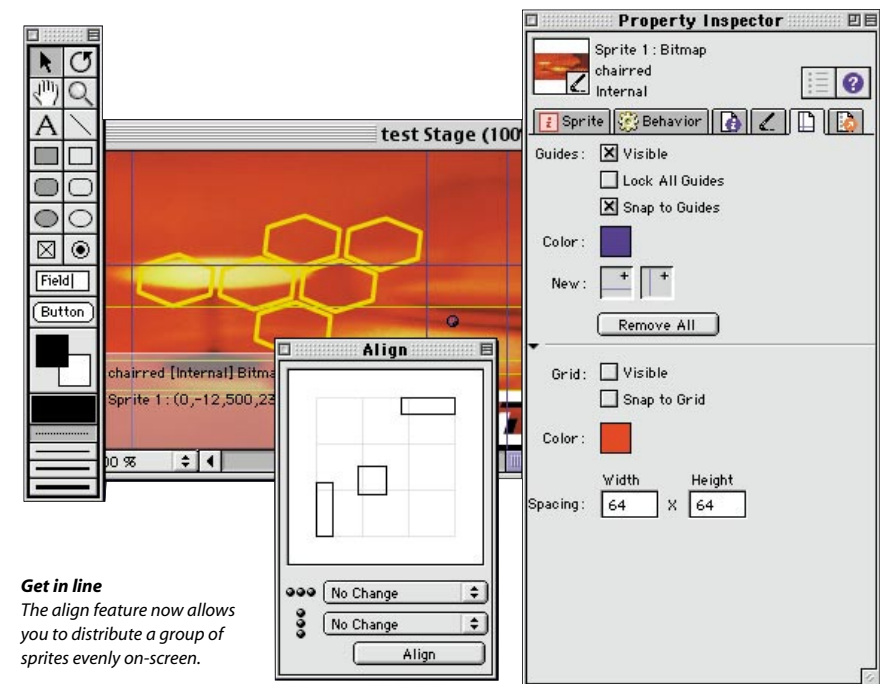


**Get in line**
The align feature now allows you to distribute a group of sprites evenly on-screen.

at the same time, and interact. Cue multi-player games, chat rooms, interactive environments and other multi-user capabilities previously only achieved using Java.

### A little bit extra
Version 2 is more robust, and now offers up to 1,000 simultaneous users, compared to the previous 50. If this isn't enough, third party Xtras can support hundreds of thousands of users simultaneously.

Macromedia has set up a trial server to test your multi-user movies, but to deliver them you will need to install the server component on a Web server. The bad news for Macintosh users is that this is currently available only on the NT or Unix operating systems – understandable, given the tiny share of Mac-based Web servers.

So what's missing in Director 8? Very little. It remains far and away the most complete multimedia-authoring tool available on any platform. And, its Xtra plug-in architecture mean that pretty much all the gaps have been covered, such as database functionality, 3D integration, and even DVD support. I'm sure support for the next generation of Internet devices, such as WAP, will be covered by a version of Shockwave as and when. Macromedia is well positioned

to take advantage of advancements in multimedia and Web technology, and enable developers to distribute Director authored content on as many formats as possible.

### Macworld's buying advice
The interface enhancements of D8 are a welcome feature, and will speed-up project development, while the grids and updated alignment will provide accuracy more quickly. The new sound tools offer much better synchronization of multiple audio members. But aside from this, there's little that's new in Director 8. The exception is the Multiuser Server, which could have a massive impact on the way online communities are built.
**Martin Gittins**



**Reaching a peak**
The Studio package now comes with Peak LE, and Director 8 features improved sound support.

## Voice•Power Pro Series 3

**Publisher:** GT Value

www.voicepowerpro.com

**Distributor:** Voiceworks (020 8455 4750)

**Pros:** Allows voice recognition within most applications; comprehensive AppleScripting; good after-sales support.

**Cons:** Price; hefty memory requirement; arduous training.

**Price:** 30-day support package, £145; 90-day support package, £199; 12-month support package, £229 (all prices excluding VAT)

**Star Rating:** ★★★★/8.1

## Preview: ViaVoice Millennium

**Publisher:** IBM (01475 555 047)

www.ibm.com/viavoice/uk

**Pros:** Price; ease of editing; impressive input speed.

**Cons:** Like Voice•Power, you have to talk to a computer.

**Price:** £69.99 (including VAT)

In terms of system software, Macs have had speech recognition for years, back to PlainTalk in System 7.5. Mac OS 9 sports Speakable Items 2.0, with over 80 application-specific commands, AppleScript support, and speakable buttons and boxes. Voice recognition has finally come of age.

The two products here use different systems. Voice•Power (VP) Pro examines each word (discrete); ViaVoice looks at phrases (continuous). Discrete has the advantage of allowing you to take breaks in dictation, but continuous can more readily recognize phrases like "whether the weather".

### Voice•Power Pro

Currently a Mac-only product, VP Pro is Dragon Systems' successor to PowerSecretary. It claims to work on any PowerPC-equipped Mac, from a first-generation PowerMac 6100 upwards, though a decent processor is essential for a reasonable dictation speed. A lightweight, pre-amped headset is included and plugs into the minijack sockets found on most Macs. There's a 140,000-word vocabulary, plus a 30,000-word user dictionary – expandable to 60,000 words.

Voices vary enormously. Even though this is a UK-specific version, country-wide accents, and the simple male/female difference, means that any voice recognition program has to be set up carefully. This is an arduous task which, in the case of VP

Pro, takes the best part of an hour's on-screen reading as you cover all 49 phonemes in the British language, in different contexts and varying sequences. The resulting voice file is then loaded up each time you use VP Pro. The good news is that this has to be performed just once.

With a voice file created, you can dictate into a variety of applications, including QuarkXPress 3 and 4, Word 6 and 98, Excel 5 and 98, PageMaker 6 and 6.5 and ClarisWorks 4 and 5, as well as SimpleText. The faster you dictate results in the inevitable trade-off between speed and accuracy. VP Pro defaults to a word-gap of 190ms, but this can be reduced to around 130ms.

When dictating, the status window updates to show the list of recently used words. As words fall off this list, any corrected ones modify the dictionary file – a continuous process that works well. You can also dive into the user dictionary and add words as you need to, pronouncing them several times to train VP Pro.

Editing dictated text could be easier. While you can control cursor movement by commands like "Move Left 5", this moves five letters to the left, not five words. Consequently it's better to edit as you go, rather than wait until the end of a file. Deleting the previous word is a simple case of saying "scratch word".

One of the most powerful features is the use of AppleScript to launch applications, control menu options, handle Finder functions and work within programs. Text macros are also supported – VP Pro can be trained to recognize everyday phrases like "all the best".

### ViaVoice Millennium

IBM's ViaVoice has been available on PC for the past two years and, courtesy of the upsurge in iMac sales, is about to be released on the Mac. This preview is based on the US version.

The training system is similar to VP Pro – sit and read on-screen text, though only for 15 minutes or so. ViaVoice examines your phrasing and creates a voice model.

All dictation takes place in SpeakPad,



**Keep to the 'Script**
Full AppleScript support and continuous word correction make Voice•Power Pro an interesting product to work with.

ViaVoice's equivalent of a basic word processor. The speed of input is impressive, clocking up around 85 words per minute – and with the disadvantage of an American dictionary. The UK version should handle over 100 words per minute.

Editing is also straightforward. Simple commands like "Move left three words" control the position of the cursor, and "Select right two words" followed by "Clear this" deletes words or phrases. The What Can I Say window can be on-screen as a constant reminder of what is allowed.

Other features include analysis of existing documents for vocabulary customization, and instant text transfer to five major applications – using the standard clipboard import function. There's even five sets of colour plastic snap-ons for the headset – one for each iMac colour.

### Macworld's buying advice

While both products handle voice recognition, the similarity ends there. Voice•Power Pro uses discrete speech and can control almost any aspect of your Mac, ViaVoice works with continuous phrases – and getting dictated text on to your screen is the all-important function.

Voice•Power Pro's aftersales support is worthy of special mention. Voiceworks offers three packages, varying only in the length of support. Included in this, is help in setting up the program, and the provision of AppleScripts as required. In fact, the 12-month package is primarily for those whose disabilities would usually preclude them from using a computer.

Voice•Power Pro's memory requirement also needs to be mentioned – around 15MB for the application and a further 96MB of free RAM if you're using Mac OS 9, less for earlier versions. On a nicer note, the CD includes all relevant updates for supported applications.

ViaVoice was certainly easier to train, but the accuracy suffered a little due to it being a US edition with American phrases – a problem when working with a continuous speech-recognition program. A full review of the UK product will follow shortly.

Voice•Power Pro's price may well affect its sales, but if, like me, you like the idea of having full voice-control of your Mac, then it's worth considering.

**Vic Lennard**



**Say it again**
ViaVoice's Audio Setup Assistant couldn't be easier to use, and the What Can I Say window can be called up – literally – as a permanent guide.

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## Dramatica Pro 4.0

**Publisher:** Screenplay Systems

www.dramatica.com

**Distributor:** Silicon Heart (0171 355 3344)

**Pros:** Polished interface; excellent built-in learning aids; flexible use of terminology.

**Cons:** Underlying theory is difficult to learn.

**Price:** £549 (excluding VAT)

**Star Rating:** ★★★★/8.7

## Plots Unlimited 1.04

**Publisher:** Ashleywilde

www.ashleywilde.com

**Pros:** Easy to learn.

**Cons:** Primitive interface; ships on floppies.

**Price:** $199 (excluding US tax) from Web site.

**Star Rating:** ★★★/5.2

Using desktop software to compose a novel is nothing new – after all, word processing was among the first personal computer applications. But using software to conceive a story sounds like magic. Yet this is the promise of Screenplay Systems' Dramatica Pro 4.0 and Ashleywilde's Plots Unlimited 1.04.

Using algorithms to craft a novel or screenplay will seem like sacrilege to many literary purists. Nevertheless, these programs can help you organize your thoughts and spot potential weaknesses in your story. But, they don't necessarily make the process easier.

Dramatica requires you to learn a difficult dramatic theory. And, a primitive interface mars Plots Unlimited, an eight-year-old program with updated packaging.

Plots Unlimited, the brainchild of a veteran TV writer and producer, is based on the notion that there are no new stories, only different ways of telling the old ones. The core of the program is a database of 5,600 conflict situations, each linked with up to 18 related conflicts.

Using the program, you can select a conflict that will occur at any point in the story, and then add lead-in or lead-out conflicts – the former move backward in time, while the latter move forward. For example, one conflict situation, "Pretending to be Jack's friend, his rival, Gary, sets a deadly trap for Jack," leads to six potential lead-outs, including, "Jack finds out that Gary has made him the fall guy in a con game." This lead-out has its own associated conflicts in turn; create enough conflict situations, and you end up with a plot.

Although it's a fascinating way to explore storytelling, Plots Unlimited seems like magic in a way the developers never intended – using it, you might think you've taken a time machine to the mid-1980s.

Created with FoxPro database software, it feels like a DOS application ported to the Mac – most shareware programs have slicker interfaces.

And, the problems are more than cosmetic. Most operations can't be undone, and simply changing the default character names is a byzantine process involving clicking on one name, making the change, and then telling the program whether you're done or want to change any other names. Adding insult to injury, the program ships on floppies. In short, Plots Unlimited needs a serious overhaul, especially considering the £125 price tag.

Dramatica Pro 4.0, a recent upgrade, is based on the Dramatica Theory, a difficult but comprehensive drama theory. Describing the theory in detail is beyond the scope of this review, but Screenplay Systems offers a free guide in PDF format on its Web site. The theory's beauty is that it lends itself to computerization, while leaving a lot of room for creativity – if you're willing to buy into it.

The core of Dramatica Pro is the Story Engine, where you answer 24 questions about your story. Based on your answers, the program generates a multitude of reports covering theme, plot, and character development. The Story Engine itself is unchanged, but additional modules guide you through the questions. For example, this version includes Structure Templates – preformatted for a novel, short story, or screenplay – offering instruction specific to that story type.

But, the most welcome change is the option to swap Dramatica's occasionally unintuitive terminology for a layperson's language. For example, previous versions of Dramatica used the words knowledge and understanding in very specific ways – if you choose the layperson's terms in Dramatica Pro 4.0, gathering information replaces knowledge. The upgrade ships on CD-ROM – dispensing with the floppy-based copy protection of earlier versions.

### Macworld's buying advice

Of the two programs, Dramatica Pro is by far the more polished, but you'll need to spend considerable time learning the Dramatica Theory to take full advantage of the program. Plots Unlimited's learning curve isn't so steep, but the program is much more limited in the storytelling guidance it provides, and it suffers from a primitive DOS-like interface.

**Stephen Beale**



**Making Casablanca**
Dramatica Pro includes examples of well-known movies to help you learn the program.

## Super-fast drafting and modelling

# DenebeCAD 2.0

**Publisher:** Deneba Software
**www.deneba.com**
**Pros:** Very fast rendering; intuitive interface; excellent AutoCAD compatibility.
**Cons:** Modest-size libraries of architectural elements.
**Price:** £495 (excluding VAT)
**Star Rating:** ★★★★/8.6

The "point of sale" in architectural design is the moment when the client is suitably dazzled. For modern architects, that moment typically arrives via a QuickTime movie tour of a new structure. DenebaCAD 2.0, Deneba Software's 2D/3D CAD application, is optimally designed for this purpose – it renders so quickly that even a humble iMac can produce a series of on-the-fly building walk-throughs for a client.

DenebaCAD blends basic 2D blueprint drafting with high-end 3D modelling and rendering. In version 2.0, Deneba has polished the rough edges of its previous version – updated formats for AutoCAD 2000 compatibility, and improved lighting effects. DenebaCAD has moved to the head of the class.

The interface has three modes: Draft resembles a standard 2D drafting program; Sculpt lets you construct 3D objects directly, or create them by extruding or otherwise manipulating 2D objects; and Render allows for the addition of lighting effects, and makes surfaces realistic. The context-sensitive menus and tool bars keep the screen blessedly uncluttered.

Designers more accustomed to 2D will find transferring their design skills to the 3D environment fairly straightforward. DenebaCAD also lets you work in the other direction – modeling fans can work directly in 3D and then generate sets of 2D drawings from their 3D objects.

DenebaCAD displays all the surface reflections, transparency, lighting effects, and other photo-realistic details you need for professional architectural design. For example, intuitive lighting controls make it easy to produce simple shadows, as well as ones seen through a transparent section. Lighting effects include not only external sun control, but also simple spotlights and parallel-light settings.

Whether you're watching DenebaCAD generate a tour through a 3D model's wire-frame rendering or produce a stereoscopic 3D blue-red QuickTime movie, the program's speed is impressive. In fact, DenebaCAD 2.0's performance – for rendering and generating QuickTime and QuickTime VR movies – is so speedy that it feels like you're using a new program. That's not far off the mark, either. While Deneba ported version 1.5's code from Windows, version 2.0's is fully optimized and refined for the Mac.

DenebaCAD supports Autodesk release
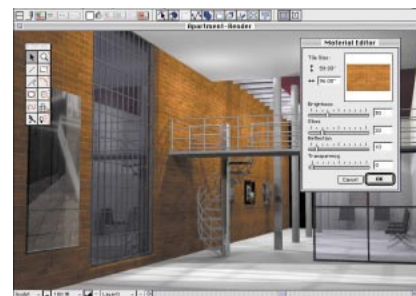


**Material World**
*DenebaCAD 2.0's Material Editor provides simple but detailed control over a material's surface appearance.*

14.01 standards for DXF and DWG files. But in our tests, it also correctly imported every 3D object in a large AutoCAD 2000 file and exported to AutoCAD a set of Deneba sample files modified to introduce potential problems. That's the best translation performance we've seen from a CAD program since 3D files became ubiquitous.

Version 2 lets you export materials fields to Microsoft Excel as tabbed text files. If you're working on a collaborative project, you can post a DenebaCAD DWF file to the Web along with the materials list as an Excel-based Web page.

### Macworld's buying advice

DenebaCAD 2.0 has muscled its way into a place where its only real direct competitor is ArchiCAD, which costs five times as much, and takes much longer to master. Deneba Software deserves credit for investing the resources to put DenebaCAD in the top rank of Mac CAD programs.
**Charles Seiter**

## Image-compression software

# LuraWave

**Publisher:** LuraTech
**www.luratech.com**
**Distributor:** Grey Matter (01364 654 100)
**Pros:** Affordable.
**Cons:** No free decompression plug-in.
**Price:** £76 (excluding VAT)
**Star Rating:** ★★★★/8.1

# PhotoJazz 2

**Publisher:** BitJazz
**www.bitjazz.com**
**Pros:** Better compression than Photoshop's TIFF LZW.
**Cons:** A one-trick pony.
**Price:** RGB only, $29; CMYK version, $79, 16-bit file version, $99 (all from Web site).
**Star Rating:** ★★★/6.7

JPEG may be the tried-and-true photo-format for the Web, but it can still add blocky artifacts to images.

Several companies have released Adobe Photoshop plug-ins that compress images without introducing those unsightly distortions. Ones to add to that list are LuraTech's LuraWave and BitJazz's PhotoJazz 2.

PhotoJazz, intended largely for use with pre-press applications, is based on a lossless compression scheme. But, it offers relatively limited compression ratios – an average of 2.5:1, compared with 10:1 or more for lossy compression schemes, such as JPEG. However, PhotoJazz gives you smaller files than Photoshop's TIFF LZW option.

The $29 entry-level version produces RGB output only, the $79 version provides CMYK output as well, and the $99 version supports output of 16-bit multi-channel files. All three include PhotoJazz XT for importing PhotoJazz images into QuarkXPress, and PhotoJazz QT, which opens and saves PhotoJazz images using QuickTime programs. BitJazz offers a free version that opens PhotoJazz images in Photoshop and most QuickTime programs.

LuraWave competes not so much with PhotoJazz as with MrSID. Both are based on wavelet technology, a lossy compression scheme that yields fewer distortions at any given compression ratio than JPEG. LuraWave's compression scheme appears



**Squeezing pixels**
*LuraWave lets you choose any compression ratio.*

to be just as effective as MrSID's. Images compressed at 10:1 had no perceptible artifacts; images compressed at 20:1 had only minor artifacts. LuraWave also includes a lossless option, but its compression ratios appear to be no better than LZW's.

LuraWave's best feature is its price: just $79, compared with MrSID's £299. Unfortunately, LuraTech does not offer a free Photoshop plug-in for opening the files.

### Macworld's buying advice

LuraWave offers compression features similar to MrSID's, and costs much less. PhotoJazz is a tougher sell, offering marginally better lossless compression than Photoshop's TIFF LZW option.
**Stephen Beale**

# HomeConnect Digital WebCam

**Manufacturer:** 3Com (0800 225 252)

**www.3com.com**

**Pros:** It's fun, with great picture quality.
**Cons:** The Internet is full of pervs.
**Price:** £129 (excluding VAT).
**Star Rating:** ★★★★/8.1

There are many reasons to buy a digital Web camera, most of which are perverted – as with much of modern technology. In the Mexican Civil War of the 1920s, Hollywood film-makers gave the Zaptistas movie-making equipment to film the revolution.

Imagine their surprise when they found that, rather than televising the revolution, they were funding the Mexican porn industry.

Anyway, apart from exposing yourself on a CUSeeMe video chat-room, there are legitimate uses for a Web camera. For those with a permanent Internet connection, setting up a window on your world is easy.

Plug in a HomeConnect camera, and fire up the SiteCam trial software. There's an AppleScript to help set up a site. Once this is mastered, new unscripted pages can be made. However, until the software is paid for, it has SiteCam plastered all over the images – and you only get 30 minutes before it times-out.

## Demos double
Different software is needed if HomeConnect is to be used for video conferencing. CUSeeMe is the oldest – and probably most advanced – while iView is a newer application – though it works well. Both have demos available.

The software offers either private conferences with a friend, or the more public video chat-rooms. If you're of a sensitive nature, or find the sight of grossly overweight men polishing their

**Not for the faint-hearted**
*The HomeConnect WebCam has many legitimate uses. Unfortunately, many people use it for home-made porn.*

family jewels anything other than funny, avoid these rooms.

In my rigorous testing of the HomeConnect, I didn't want to upset the chat-room people by pointing the camera at myself. Instead, I pointed the camera at *Macworld*'s reporter, Louise Banbury – and logged on to CUSeeMe.

In seconds, pants were dropping like spring blossoms, and proposals of marriage started to flood in. I think the whole office found this more than a little disturbing, but obviously thousands of people do love it (and Louise).

The picture quality was considerably better than other Web-cams I've seen. The picture was bright and sharp, and the 640-x-480 resolution is plenty good enough. The simple USB interface is infinitely better than the older serial-Web cams, allowing for faster refreshes.

## Macworld's buying advice
Driver software for the HomeConnect doesn't come with the camera. Instead, a beta version must be downloaded from the Web site. This is a minor hassle, but the software appeared stable. Third-party software is needed, but there are both shareware and commercial applications available. It's a fun gadget and a helpful tool, but most users are just going to use it for a laugh. We certainly had fun with it here.
**David Fanning**

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# Eudora Pro 4.31

**Publisher:** Qualcomm

**www.eudora.com**

**Pros:** Quality email program for free.
**Cons:** Adverts will annoy some – but you can always pay $39.95 and get rid of them.
**Price:** Free on this months CD.
**Star Rating:** ★★★★/8.0

The name Eudora is synonymous with email, having been around for over ten years. While both Netscape Communicator and Microsoft Internet Explorer offer email options, the latter through Outlook Express, millions of people around the world use Eudora Pro and the freeware Light version.

Why use a third-party program when email software is built into your Web browser? A number of reasons. First, Qualcomm has a reputation for support and product user-friendliness that is second-to-none. Second, Eudora Pro is a good emailer, offering numerous features. Extensive filtering, automatic name-completion on

email addresses and multiple email accounts. There's also the ability to send and receive email in the background, multiple signatures, HTML and graphics viewing within the body of a message – the list is almost endless.

But the main reason to give Eudora Pro 4.31 a really good look is it's free...at a price. Most users will happily live with this catch, for Qualcomm has come up with an innovative marketing ploy. In Sponsored mode, Eudora Pro is full-featured, free of charge and even includes free technical support, with up to six calls per year. The catch is the meaning of 'sponsored' – there's a small desktop box that displays a series of static adverts. As these are in PNG format, they're small (less then 5K), and as they're on the desktop, they don't interfere with the workings of Eudora.

For those who really can't live with adverts, Qualcomm offers two alternatives. Paid mode allows you to cough-up the registration fee of $39.95 for the full package, less the adverts. The Light mode is essentially a more modern version of the older Eudora Light – less functionality, but again, no adverts. If you're currently a registered user of Eudora Pro, don't worry: the Paid mode of version 4.3 is free.

## Macworld's buying advice
Some users have voiced concerns over Qualcomm's apparent 'getting into bed'
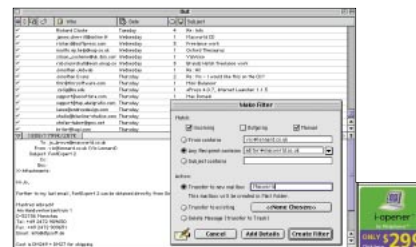
**Free for all**
*Eudora Pro's comprehensive filtering makes message sorting a doddle.*

with advertisers. Although it's a fine line, Qualcomm appears to be treading on the right side. You can fill out a profile and give an indication of what kind of adverts you'd like to see, or simply take pot luck. Either way, clicking on an advert gives no information about you to that advertiser. Consequently it's a safe solution.

Eudora Light has been my personal emailer since 1994 and, although various jobs have dictated the use of both Communicator and Outlook Express, I've never changed my home set-up. Until now. The upgrade to Eudora Pro 4.3 was seamless and the adverts are bearable. Try it – Communicator and Outlook Express's settings, mail and address books can be imported, and the installer is sitting on this month's cover CD.
**Vic Lennard**

# Nikon D1

**Manufacturer:** Nikon (0800 230 220)
**www.nikon.co.uk**
**Pros:** Super high-quality pictures;
full Nikon system compatibility.
**Cons:** Even the bargain price of £3,799 is out
of range for all but the true professional.
**Price:** D1 and kit, £3,799; SB28DX Flashgun,
£399; AF-F 17-35mm f2.8d lens, £1,499
(all prices include VAT).
**Star Rating:** ★★★★/8.4

If you've never had the opportunity to use a camera like the Nikon D1, let me tell you – it produces the highest quality pictures I have seen from a digital camera. However, only professional photographers are likely to be able to justify the expense – with the lens and flash, the price approaches £6,000.

Why does a 2.7-megapixel camera cost so much? Because, it isn't like the average CCD (charge couple device).

In most two-megapixels cameras, the CCD that picks up light information is tiny. The D1's CCD is 23.7-x-15.6mm – almost double the normal size, meaning that each pixel on the CCD is bigger. On other peripherals, such as printers, bigger pixel size means poorer quality. In cameras though, it's a good thing. It means more light is gathered by each pixel, radically reducing the visual noise that's a feature

of most digital cameras. There was no noise in any of the pictures I took with the D1.

The only thing that looks different from a normal SLR camera is its LCD screen – which is hidden under a plastic cap.

Like its analogue cousins, the D1 is capable of amazing results using a wealth of automatic features. These include 3D colour-matrix metering, tone compensation and white balance. Also, programmed shutter priority and aperture priority mean automatic-precise exposure. The most impressive automatic feature is the lens, which uses a Silent Wave Motor to quickly and perfectly adjust the focus.

Images can be stored using a selection of compression methods, or, for purists, it can record raw data for processing later. Uncompressed data can be as much as 7MB per image, so a 64MB CompactFlash card is provided. The card can be used with a bundled PC card adaptor. Or, if you are lucky enough to have one of the new FireWire-equipped PowerBooks, there's

**Picture perfect**
*The D1 could revolutionize the digital camera market.*

a FireWire port. This means that transferring big files is instantaneous. With some additional Nikon software, you can record the images directly to the desktop via FireWire. This makes a huge difference. No more pre-shoot Polaroid test shots, no more swapping film backs, and, most importantly, no more film developing and scanning. This can save a studio thousands of pounds, and hours of work.

It's studio and newspaper photographers that this camera will to appeal to. It offers real advantages over traditional film cameras. A quick tot-up of monthly outgoings is bound to show that the D1 will pay for itself – and quickly.

The continuous-shot mode enables 4.5 pictures per second to be taken. Quick processing makes it possible to shoot up to 21 pictures at a time. When pausing, the camera continues processing the images – and it gives a running total of how many more can be shot in one go. Pictures are instantly available to picture editors

### Macworld's buying advice
The world of professional photography is a broad church, accommodating telephoto-touting paparazzi, to Hasselblad-wielding portrait artists. This camera will not appeal to all photographers, but it's going to make major inroads to those who need the speed and flexibility of digital photography. There are other cameras capable of this kind of image quality, but, historically, they have started at £10,000 – and gone up from there. The D1 will revolutionize the market with its low price. Although £3,800 may not seem cheap, it can save so much time and money that it's worth its weight in gold.
**David Fanning**

# Advanced English

**Publisher:** EuroTalk (020 7371 7711)
**Pros:** Entertaining English tutor.
**Cons:** Foreigners will be even better than us at Morse impressions.
**Price:** £34.99 (including VAT)
**Star Rating:** ★★★★/8.2

Remember ITV's lamentable *Mind your language* sitcom (**http://www.phill.co.uk/comedy/language/index.html**). Over 25 excruciating episodes, viewers were subjected to every racial gag known to man. No foreigner was left unoffended as a classroom of stereotypes tried to get to grips with the English language.

But the sad truth for us Brits is that most

Europeans, Africans and Asians we meet speak better English than we can. We're lucky they all speak our language, because we simply cannot be bothered to learn theirs. Shouting English loudly in a Belgian bar will get you a beer. Imagine a Belgian yelling Flemish down your local boozer – he'd be on the floor faster than Jurgen Klinsman.

Now there's an entertaining Mac package that could help hone their English to real Oxford standards.

What's more British than racist jokes? *Inspector Morse*, of course. And this EuroTalk Advanced English DVD features a whole episode of our favourite white-haired gruff detective. All the dialogue is subtitled below the action, so that students can learn the subtleties of our language.

Of course, a potential problem is that all the dialogue is spoken by cops and villains. Monsieur Beret could greet us all with "Not now, Lewis!" as he steps off the Eurostar.

Once the students have watched the *Morse* episode, they're encouraged to enter a virtual gameshow against computer-controlled Morse expert Dave. You'll



**Not now, Lewis!**
*Prepare yourself for an invasion of Oxonian-sounding foreigners.*

be quizzed on dialogue from straight vocabulary to strange English colloquialisms.

### Macworld's buying advice
Advanced English with Inspector Morse is a rounded, professional tutoring package that will make learning English a little more real than turgid traditional methods. But what we really need is Advanced French with Maigret, or even West Country with Shoestring.
**Simon Jary**

**360-degree digital camera**

# Panoscan

**Manufacturer:** Panoscan
**www.panoscan.com**
**Distributor:** Cinebuild (0171 582 8750)
**Pros:** Obscenely high-res.
**Cons:** Obscenely expensive.
**Rental Price:** Camera-only rental, £480/day; daily rate, £540; weekly rate, £1,440 (all excluding VAT).
**Star Rating:** ★★★★/8.4

The second most expensive thing I've handled is the World Cup. I did what no England captain since Bobby Moore has managed – albeit in Asda's High Wycombe store – during a bizarre tour the famous trophy was taken on around the supermarket's UK outlets in 1998.

The most expensive is the Panoscan, a £20,000 digital panoramic-capture camera.

Digital Panoramic photography took off in the mid-1990s, with the advent of the perspective-correcting software QuickTime VR (QTVR). This allowed for "immersive imaging" – letting the computer-using viewer step inside a correct-perspective 360-degree image, with the ability to see and zoom in all directions

## Stitched-up

Prior to the Panoscan, the methods of capturing such an image involved taking a succession of digital – or, God forbid, film-based – images covering the required 360 degrees, and then stitching them together electronically. The stitching process can take an age.

This is where the Gitzo tripod-mounted Panoscan comes into its own: it involves no film, no scanning, no stitching and no post-production. The camera-back employs

digital line-scan technology, which gives it an obscene top resolution of 7,072-x-22,000 pixels in its 360-degree revolution. Even in its lowest resolution setting, it produces fantastically crisp images. A single 15-minute high-res 360-degree scan packs a mighty 565MB.

Lighting is also much less of an issue than with standard digital photography, because the Panoscan gives ISO sensitivity of up to 1,600, allowing for shooting in most lighting situations.

The image below was taken on a 28mm Nikon lens, at ISO 800 at 1/30 of a second on an overcast day in the *Macworld* office – never the best-lit of places. In photographic terms – it's a right result.

## Flexible lens

Panoscan can be used with a variety of lenses – from 16mm to 50mm – and images transformed into spherical, cylindrical, or conical forms. The system can also be synchronized with a turntable to record "object movies" – views showing all sides of the object on a turntable. It is also capable of taking professional-level studio still photographs.

Panoscan's Phase One interface software has a number of useful features. Using Film Curve, over-exposed areas can dimmed and darkened areas lightened. High Shadow Detail letsa images lit by a strong single light-source to be evenly lit.

Because the Panoscan is designed to capture still-images only, movement is registered as distortion. So that 15-minute scans aren't ruined by rogue passers-by – or *Macworld*'s deputy editor (see blob, bottom centre, in our case – a click of the mouse halts the scan until the nuisance has passed. Because the flow of pixels has been merely halted, there's no vertical white stripe – like you'd have with film.

The Panoscan is designed for mobile use. As well as a mains connection, it comes with a 12V gel-cell battery, from which both the Panoscan and a G3 Power Book can be run. The complete system – including tripod – weighs 40lb.

## Macworld's buying advice

With a price tag of £20k, the Panoscan was never going to be for anything other than high-end industrial use.

Its massively high-res images make it ideal for heavy-duty professional use. Police departments in the US and Europe are looking to use it for capturing crime scenes. Its top-end scans mean that details as small as writing on sweet wrappers in a bin on the other side of a room can be rendered clearly.

Architects and estate agents are also lining up to use it, to capture virtual walk-throughs of properties and public buildings. The Louvre in Paris is in the process of shooting a virtual version of its galleries for CD-ROM using the Panoscan.

It should prove popular too with specialist photographers – who shoot the interiors of cars and boats for brochures and Web sites, for example.

Although it's been around in the US since early 1999, the Panoscan became available for the first time this Europe in January. Renting will be the likeliest means of access to all but the most affluent photographer.

The thing with the Panoscan is that it needs a studio of people with specialist skills to get QTVR results. Capturing the image is the easy bit – it's ending up with a professional-looking QuickTime VR movie that's the tough part. First, it requires at least a working knowledge of Adobe Photoshop for touching up and fine-tuning the panoramic image. More complicated, though, is the QTVR rendering process. First we tried using The VR Worx, before realizing it wasn't suitable. Then we looked at Epson Spin Panorama, which worked, but the QTVR resolution and stitching were way off. In the end, we turned to Apple's £279 QuickTime VR Authoring Studio. You can see the result on Macworld Online, at .

Panoscan's agent for Europe, Cinebuild, insists on training rentees to "an acceptable level".

**Sean Ashcroft**

**Action stations**
*Panoscan took only two minutes to capture this picture of* Macworld's *office. Even though the picture is taken at Panoscan's lowest resolution, detail remains clear.*

**Mono-laser printer**

# Kyocera PS 3750

**Manufacturer:** Kyocera 08457 103 104
**Pros:** Fast; high resolution; inexpensive.
**Cons:** Installation could prove tricky to novices.
**Price:** £989
**Star Rating:** ★★★★/8.5

In a world full of colour printers it's easy to forget that most office printing is still served by mono lasers. Kyocera has released a new range of printers with this in mind, including the Kyocera FS-3750.

I've seen printers from Kyocera before, usually for group tests of laser printers. Unfortunately, in the past, they didn't make the grade for inclusion because of general Mac-unfriendliness. This new range of printers indicates a change of heart regarding Mac compatibility.

For a first stab at Mac printing, Kyocera has done well, but there's still room for improvement. The first thing the user needs to do is install the drivers. This is relatively straightforward, although novices may get confused.

The next hurdle is getting the printer to talk to the Macintosh network. Again, this may catch-out a novice, but most offices have a pseudo-techie. Future models may be pre-configured to recognize a Mac network.

When it's up and running, it's a terrific printer, printing up to 1,200dpi, and happily cranking out 18 pages per minute. It comes with a two-year warranty, and Kyocera claims the lowest cost per page in the industry. Nice!.

The low-cost printing is due to the Ecosys cartridge-free toner system, meaning the drum and developer doesn't get replaced with every toner refill. The only waste is the toner container.

The casing that holds the whole package is small – which is good – but it's also ugly. You can increase the ugly factor by adding extra bits to it. There's a selection of add-ons, including a duplex unit, envelope feeder, stacker, sorter, stack feeder and so on. The end result looks a bit like Frankenstein's monster.

## Macworld's buying advice

For the price, this printer is hard to beat. It's super-fast and has a super-high resolution. The installation process could be simpler, but it only needs to be done once. For mono printing it's an ugly duckling, but a great performer.

**David Fanning**

*Speedy*
*The Kyocera FS-3750 can output 18 pages per minute – not bad for Kyocera's first real stab at the Mac market.*

# MYOB Accounting/ Accounting Plus

**Publisher:** MYOB (01752 201 901)

**www.myob.co.uk**

**Pros:** Useful new features including payroll management; network capability; substantial manual and tutorials.

**Cons:** User interface may annoy some.

**Price:** MYOB Accounting, £195; MYOB Accounting Plus, £295 (excluding VAT). Upgrades available from all previous versions.

**Star Rating:** ★★★★★/9.1

**T**he term small business can be applied to anything from one-man bands to companies with 30 or so employees. As such, any accounting package that purports to be suitable for small companies has to offer features suitable for both ends of the spectrum. With this in mind, MYOB – the book-keeping application against which any other Mac equivalent is inevitably compared – has been split into two variants: MYOB Accounting and MYOB Accounting Plus.

Both products offer fully-integrated double-entry accounting with nominal

**Cheque it out**
*MYOB Accounting's redesigned user interface and its new payroll-management module enhance an already quality product.*

ledger, sales, purchases, stock control and a card-file system. Both also share certain new and upgraded features, including being multi-user ready at a cost of £120 per additional user.

MYOB now takes the drudgery out of managing payrolls. It calculates wages, deductions and taxes automatically, handles recurring salaries, allows manual intervention for periodic changes, and prints out payslips and cheques.

Pay periods are flexible and can even differ from employee to employee – for instance, sales staff can be handled weekly on an hourly rate with commission, overtime and bonuses, while the rest of the company are paid monthly. Even the setting-up process is simplified courtesy of the built-in Setup Wizard.

Feedback has led to improvements in the stock-control side. Item-history data

can now go back five years and includes more information – such as the quantity sold, how much for, and quantities purchased. Also, item numbers now support 30 characters for enhanced product information, and back-ordering is improved.

Having a clear picture of your debtors and creditors is crucial in the running of a business. Previously, MYOB handled the typical 30/60/90 day periods – the current version allows for any credit term periods. It also offers user-defined ageing so that you can see a company's true financial situation at the press of a button.

For those whose needs include professional time-billing, enhanced stock control and foreign currency handling, MYOB Accounting Plus fits the bill.

## Macworld's buying advice

MYOB's user interface has been redesigned, though this isn't necessarily a good thing – it's a little too Windows-like for my taste, with pull-down rather than drop-down menus. Still, most of its predecessor's good points remain, including minimal memory needs (5MB useable RAM). A number of small additions will be welcomed, such as printing VAT-only cheques – useful when buying from the US – importing high-resolution logos and graphics, and various expandable fields.

Extra features, enhanced facilities, same price – a worthwhile upgrade and certainly worthy of consideration over that £10,000 bespoke system you were considering.
**Vic Lennard**

# Starry Night Backyard 3

**Publisher:** Sienna Software

**www.siennasoft.com**

**Distributor:** Guildsoft (01752 895100)

**Pros:** Excellent user interface; visually exciting; can record dynamic scenes as QuickTime movies.

**Cons:** Not cheap enough to be a must-buy.

**Price:** £49.95 (including VAT).

**Star Rating:** ★★★★/8.9

**M**ost kids take a passing interest in astronomy, and even most adults can glance at the night sky and pick out the Plough, Orion's Belt and the Dog Star. To go much further requires a telescope and knowledge – and the latter is where Starry Night Backyard comes in.

In a more basic guise, Starry Night has been available since 1991 and has grown into the premier astronomy package. Now available in two flavours (Pro, reviewed in

September 1999, and Backyard), it offers access to heavyweight astronomical data, but in an easily-digestible form.

Set-up couldn't be easier: select your home location and the screen shows the sky at the current time. Drag it round so that the compass point matches the direction from your current viewpoint, and you have a mirror image of the scene beyond your window.

Stars and planets usually appear only at night-time, but not here. By changing the time-step to one hour, a few clicks on the forward button take you to the evening, or the next day or week – allowing you to make plans for future viewing.

Using a database that includes over one million stars plus all the planets, Backyard is a also very good educational tool. Constellations can be shown as basic 'stick' figures, as well as the characteristic illustrations.

But Backyard is far more than just an academic device. Select any planet, or one of its moons, and view the galaxy from there. See the inner and outer solar systems in moving, pictorial glory. Watch the planets trace their paths with the Earth as the static centre. Double-click on a star or planet and go there, watching the movements of the other celestial bodies as you fly, capturing the entire adventure as a movie.

Sienna Software also deserves credit for

www.livesky.com, the Web site accessible from within Backyard – just point to an item and get instant information. The site also includes interesting pictures, features and a link to Britain's Astronomy Now site.

## Macworld's buying advice

Anyone with the slightest interest in astronomy will find Backyard rivetting; owners of a basic Meade or Bresser telescope will use it as their main source of reference.

If you want a larger star-database, more advanced star charts and constellation information, plus computerized control of a number of expensive telescopes, then look at the Pro version. If not, Backyard is the perfect astronomy companion.
**Vic Lennard**

**Stars in your eyes**
*Stars, planets, constellations and a dedicated Web site for information – Starry Night Backyard has the lot.*

# Exclusive! Mac OS X Developer Release 3 previewed

Just as we were going to press, the Developer Release 3 of Mac OS X was seeded. As we managed to snag a copy, we thought it only fair to give you a sneak preview of the future of Macintosh computing. This version of the operating system is not fully functional yet, although it worked amazingly well for us. There are only a few applications that support it so far – mostly utilities – so we didn't really get to push it to the limits. However, what we saw of OS X was stable – even if *we* weren't, after playing with its new ways of working. Whatever its bad points – the Dock in particular seems problematic – we did find the Aqua interface striking and a pleasant change from a look that has changed little in ten years.

As we reported heavily in the previous issue (*Macworld*, March 2000) Mac OS X is Apple's long-awaited next-generation operating system that will blow away 16 years of code cobwebs, and push software performance through the roof.

Mac OS X, developed from Steve Jobs' former company's Unix-based NeXTStep operating system, will grace the Mac with new features and make it a lot more stable. Even Apple admits it will crash – it's a computer operating system, for crying out loud – but when it does, you won't lose everything; just the unsaved work in the application that bombs.

The most noticeable new things about Mac OS X are this increased stability, and the funky Aqua interface – which isn't all liquidy looks, as it radically changes the way a Mac works. Many familiar foibles of previous OS versions are gone. No doubt quite a few new ones are added. The Chooser is no more (hooray!), and Control Panels have been rationalized – most becoming easy-access Preferences.

## Shock of the new

One of the tag lines for the release of Mac OS 9 went along the lines of "get a whole new computer for the price of an upgrade". It wasn't entirely true – you got a couple of new features, a tidy-up, and the odd bell and whistle. But Mac OS X really does transform a Macintosh into something quite different.

What USB and FireWire, colourful plastics and no floppy drive did for Apple hardware, Mac OS X does for software.

It's strange, as veterans of so many Mac OS versions, to be confronted with an entirely different computer. All of a sudden it feels like you're a novice again – tentatively trying every option, searching every nook and cranny. *Mac OS X for Dummies* is going to be one hell of a big seller – expect one this summer from, *Macworld* publishing off-shoot, IDG Books.

The scariest part of OS X DP3 is the installation – although any Unix-based operating system is never easy to install. The Developer release recommends partitioning the hard drive as two volumes, one for OS 9 and one for OS X. This leaves an escape route if things start going pear – rather than Apple – shaped. Restart when it's done, and you find yourself in a UI twilight zone.

**Compatibility** Microsoft will probably be its normal slow self when OS X comes out, and we will have to wait for popular applications like Office and Outlook Express to be Carbonized – Apple's fancy name for apps being made OS X native. Luckily, OS X does run 'Classic' (non-native) programs under emulation – but with none of the new features. In our tests, Classic apps ran smoothly – if slowly and at the cost of precious memory.

**Memory** While OS X DP3 runs on its minimum 64MB of RAM, you're going to have to upgrade your memory significantly when you switch. Classic apps, in particular, eat RAM for breakfast, brunch and lunch. OS X is a pre-emptive multitasking system, so you can open lots of apps at the same time – but you could find yourself stuck in the trudging wilderness of virtual memory if you're not careful.

**Dock** Navigating around the interface is confusing at first, and the Dock at the bottom of the screen does little to help matters.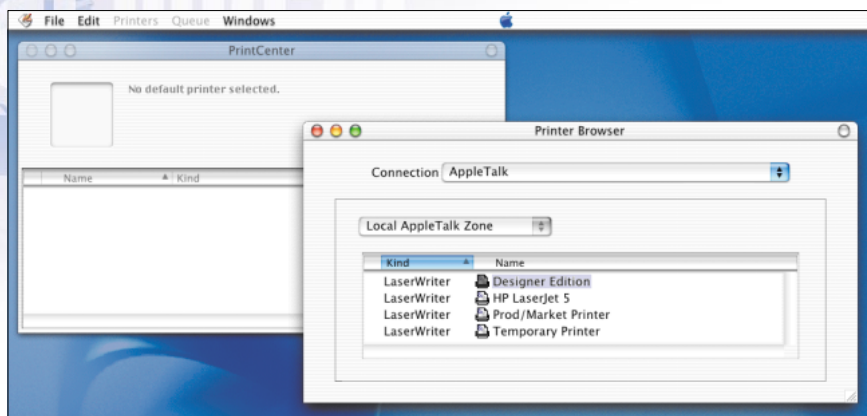 The Dock is a row of icons that sits across the bottom of the screen and stores any open application or document, as well as just about everything else.

Another possible problem with the Dock is its limited capacity. Stuff in too many docs, and the Dock gets clogged. The Dock arranges its icons as it sees fit – you can move them around, but new minimized windows muscle in and spoil your carefully constructed order. Unless Apple fixes this, we'll all start missing the alphabetical Applications menu and Apple Menu like Ernie missed Eric.

The Dock's Magnification effect (shown below) gracefully but speedily enlarges icons as you scroll over the ever-decreasing Dock inhabitants.

**Goodbye Key Caps**
*OS X keyboard preferences replace Key Caps and allow you to localize your keyboard settings. Note that the Keyboard's title bar only seems blue because of the background colour – it's actually semi-transparent.*



**Email in a hurry**
*As well as SimpleText replacement in Text Editor, OS X come with its own built-in email software, Mail. The text is beautifully smooth as it's anti-aliased – as is the norm for OS X. Mail looks like a finely crafted Web site. The email functions were fairly basic, lacking sophisticated filtering, but there was at least a spell checker.*
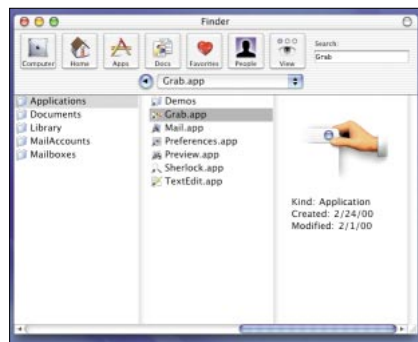


**Finder's keepers**
*The Finder is no longer your whole desktop, but a single window with three different viewing option, including this three-column list view – here showing the whereabouts of Apple's new screen-capture tool, Grab. The small aqua-blue arrow above the central column acts like a Web browser's Back button.*

**Good riddance to old rubbish**

*The demise of the Chooser, which we won't miss, means there is a new way to select and manage a printer – the PrintCenter (yes, another US spelling to get used to). The only thing we had against the Chooser was that it wasn't called Printer Chooser, because it was a Jack of all trades – with network duties clogging up the box. Novices using a Mac for the first time needed to guess that the Chooser was their route to printing. In Windows, there was a great big control panel called "Add a Printer" – now that's obvious. The PrintCenter offers a selection of printers, and then lets you choose one as the main printer – it's all pretty straightforward.*

**Whatever you want**

*Icons sizes go beyond just small, medium and large in OS X, which has a slider so you can get it just right. Not as many icons are needed as in the past. Dragging a file or folder to the desktop of this OS simply creates an alias – like Windows; just another thing to get used to, as many things change with OS X. Look, even double clicking is only an option. Also note the pulsating Aqua default button – will it survive repeated viewing? With single-window mode off, the top-right button turns from purple to see-through.*

**Out for a duck**

*Now that Control Panels has been dumped, sound, network and mouse settings are found in the Preferences window. Note the welcome return of Quack, which horrified all when removed from Mac OS 9.*

It's a wow. But maybe OS 9's handy pop-up tab folders have been sacrificed for all this crowded flash. There's colour-coded lines under each Dock application – yellow for active, white for inactive – but that's not enough to make up for the loss of an Applications menu.

**Pulsate** Colour plays a big part in OS X – particularly Aqua itself. Opinion is sure to be divided about the new "pulsating" default buttons. They look great to start with, but staring at a slow-blinking screen all day gave us a headache.

**See-through** More subdued translucence – Apple's big thing – is found in the title bars of inactive windows. Subtlety wins here, although titles showing through stacked windows can look messy.

**Single window mode** The ability to minimize – send to the Dock – all windows but the frontmost could help computer novices, but is unlikely to interest the more experienced. So the presence of the single-

window mode button on the top right of every window title bar is unnecessarily obtrusive. Why wasn't this a more discreet feature or just a Preference?

**Apple logo** Another thing that bugged us was the blue Apple logo in the centre of the menubar – it does nothing but get in the way of your application's menu tools. Worse, Classic apps' menu tools actually sit awkwardly over the impotent icon. It makes the loss of the Apple menu even harder to bear.

**Keyboard** One thing we found reassuring after the recent UK-English furore, was the support for non-US languages. Not only can a UK keyboard be specified, but you can specify the order of preferences for languages. This is considered a minimum requirement by most UK users, and it is done elegantly. UK dictionaries will be available – but all interface spellings are still US-based ('Color', 'PrintCentre', etc).

OS X shows a Key Caps-style keyboard, so differences between keyboard layouts are clear. It also changes the font shown on the keyboard, so no more need for Key Caps.

**Trash** Unchanged is the ability to eject a disk by dragging its icon to the Trash. Now, at least the Trash icon changes to an eject symbol (pictured above) when a disk is hovered over it. Under hovering files, the icon switches to a pair of scissors – indicating deletion. Stuff a file in the Trash, and the wastebasket icon fills with paper.

**Prefs** Just about anything that was a Control Panel in OS 9 is now accessible from the clean Preferences application in OS X. Location manager,

Time settings, Keyboard, Monitor, and Mouse speeds are all here. Some of the more sensitive settings – such as network access – are locked until the administrator password is given. This helps keep hackers at bay, and novices out of harm's way.

## X-rated or X-citing?

You can't buy this version of Mac OS X, and the public release date isn't for some months – July at the very earliest, we reckon. But, you can prepare for OS X. Make sure you have an up-to-date computer for starters. OS X may run on older models, but it isn't clear how old.

It should be fine on all the models released since the return of Steve Jobs to Apple, namely iMacs, iBooks, G3 PowerBooks and G3/G4 Power Macs. And keep buying the RAM chips.

Maybe it'll just take a lot of getting used to, but the Dock seems a very poor replacement for the admirably hierachical Apple and Applications menus. It starts off too big, then gets more cramped than London's tube system and a lot harder to navigate.

That said, the Dock is the easiest new feature to learn in Mac OS X. It works OK, it just seems to pale in the face of current Macintosh selection menus.

When OS X is released many people will shy away from switching – and they're be right to be wary. There's always a divine wind of early adopters willing to sacrifice their Macs to be the first on the block with an upgrade – especially one this major. *Macworld* already has a machine running this early version, and we'll present more updates as later versions come our way.

**David Fanning & Simon Jary**
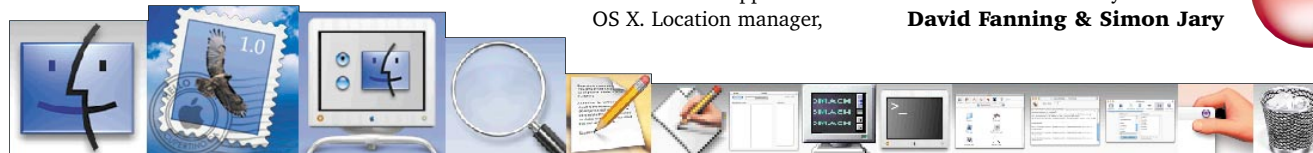
# *Speed takes lead*

Apple's new Macs tested, reviewed and rated. **By Simon Jary**

**J**anuary's Macworld Expo in San Francisco was noticeable for its lack of any new Apple hardware announcements – despite many Web-fuelled rumours of a dazzling new G4 PowerBook, Apple-branded colour Palm handhelds and iMacs with 17-inch screens. Instead, we got Mac OS X and its flashy Aqua interface, and Apple's free iTools (see *Macworld*, March 2000).

Apple's most successful computer ever, the iMac was transformed into the sexy, see-through iMac DV last October, leaving several older varieties of Mac looking distinctly under-nourished. The PowerBook hadn't seen an upgrade since May 1999. The iBook boasted a mere 32MB of memory. And the G4 Power Macs had suffered an embarrassing climbdown in speed, from Apple's original promise of 500MHz at the high-end (see December 1999).

February's Macworld Expo in Tokyo was the next possible roll-out date – and, this time, we were lavished with PowerBook, iBook and Power Mac revamps. Nothing unexpected, mind, but the whole Mac range – desktop and portable, consumer and professional – is a lot more tempting post-Tokyo.

All the new Macs have been subjected to rigorous testing in *Macworld*'s Test Centre. Keep reading to find out if one of these millennium Mac babies is for you.

# PowerBook

## The big surprise is there's no big surprises. The pro portable gets FireWire and new video…



| Processor | Hard disk | RAM | Modem | Battery | Price | | Star Rating |
| PowerPC G3 | Ultra ATA | | 56Kbps | 5 hours | ex. VAT | | |
|---|---|---|---|---|---|---|---|
| 400MHz | 6GB | 64MB | Yes | 1 | £1,699 | | ★★★★/8.6 |

**Pros:** FireWire; slim; DVD-ROM.  **Cons:** Needs more RAM; iBook SE wins on looks.

| 500MHz | 12GB | 128MB | Yes | 1 | £2,349 | | ★★★★/8.7 |
|---|---|---|---|---|---|---|---|

**Pros:** Fastest laptop ever; FireWire; slim; DVD-ROM.  **Cons:** iBook SE wins on looks.

| 500MHz | 18GB | 128MB | Yes | 2 | £2,737 | | ★★★★/8.6 |
|---|---|---|---|---|---|---|---|

**Pros:** Fastest laptop ever; FireWire; two batteries; DVD-ROM.  **Cons:** iBook's looks.

The biggest rumour concerning January's Macworld Expo in San Francisco featured the anticipated arrival of an all-new PowerBook, code-named 'Pismo'. Depending on which Web rumour site you read at the time, Pismo was to feature a G4 processor, glowing keyboard and semi-translucent plastic case. Expectations ran high – the pro Mac portable was to be transformed.

As it turned out Pismo was a no-no – even at the Tokyo expo. The new PowerBook doesn't look any different to its previous incarnation – same case, same screen, same G3 processor. Disappointed? Apple believes you won't be – as the new professional portables are faster (up to 500MHz) and offer super-speedy FireWire connectivity ports for digital video and smart, hot-swapable hard drives.

Apple claims the 500MHz PowerBook outperforms Pentium III-based notebooks by up to 30 per cent, based on 16 actions in Adobe Photoshop 5.5 when running on battery and AC power. According to our tests against the previously fastest PowerBook, the 500MHz is 15 per cent faster than the 400MHz. The graphics score was a mere 3 per cent faster despite its new ATI RAGE Mobility 128 video controller. The processor score was 26 per cent nippier, but the big surge was in the disk score – a full 36 per cent faster. System bus speed is up to 100MHz. The 500MHz PowerBook is faster than many recent desktop Macs, such as the 400MHz Power Mac G3. Apart from the extra punch, the big difference with the new PowerBook is the addition of two 400Mbps FireWire ports that provide data transfer and power to a growing number of high-speed peripherals, such as digital camcorders and hard disks. Unless you're totally studio-based, the linking of camcorder and portable computer is perfect. Large–screen playback and on-the-ground editing are now super easy with the PowerBook's new FireWire compatibility.

Another me-too Mac tech-advance is the PowerBook's adoption of Apple's 11Mbps AirPort wireless technology for cable-free Internet use and networking – now available for every new Mac.

**The case for design**  At first glance, it's rather disappointing that Apple didn't iMac-ize the professional portable. It might be more attractive than most run-of-the-mill laptops (which look like a kid's toy briefcase), but it stands rather alone in Apple's otherwise translucent colourful line-up. Does (Apple's chief designer) Jonathan Ive really not care about the PowerBook?

The Blueberry and Tangerine iBooks are remarkable-looking portables – but even Apple can't have hoped that they'd appeal to the pinstripe brigade. But the arrival of the Graphite iBook Special Edition (see opposite page) makes the current PowerBook look quite the ugly duckling among the other Apple peacocks. And, as I point out in my iBook review, the consumer portable has design features that make the PowerBook look like a pretty old duckling at that.

One iBook design darling that does make the leap to the PowerBook is Ive's wonderful yoyo cable coil (pictured below). It might not fit in with the PowerBook's black case, but it's a definite improvement on the previous messy power-cable set-up.

### Macworld's buying advice

The new PowerBook is no great leap from the previous incarnation, unless you need the FireWire digital-video addition. It's faster, and no one can complain about that – especially as the price has remained unchanged (actually, it's slightly cheaper – praise the pound). But if you were waiting for a new-look Mac portable, then you'd better decide whether the non-expandable iBook SE is a better deal for you now. If all the pro features are for you, then the 500MHz PowerBook is a compelling buy. A redesigned, lighter G4-based portable 'could' become available sometime this year – but, as we've just discovered, PowerBook rumours haven't been that dependable recently, so be prepared to wait a while longer yet.

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## New Mac portables: speed vs looks

The professional PowerBook remains unchanged, apart from a serious speed bump. The sober-looking iBook Special Edition may take those PowerBook customers not obsessed by speed or digital video.

☐ Best results in test.  Longer bars are better.

| Mac performance compared: | Processor | Disk | Graphics | Overall Score |
|---|---|---|---|---|
| PowerBook G3/500 | 1,531 | 1,323 | 3,030 | 1,961 |
| PowerBook G3/400 | 1,214 | 972 | 2,928 | 1,705 |
| PowerBook G3/333 | 914 | 755 | 1,415 | 1,023 |
| iBook SE (366MHz) | 894 | 1,150 | 2,245 | 1,430 |
| iBook (300MHz) | 833 | 882 | 1,845 | 1,187 |
| iMac DV (400MHz) | 1,003 | 1,454 | 2,863 | 1,773 |
| iMac (350MHz) | 932 | 882 | 2,224 | 1,547 |

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# iBook

## New Special Edition consumer portable great enough to rival the plain PowerBook…



| Processor | Hard disk | RAM | Modem | Colour | Price | Star Rating |
| PowerPC G3 | Ultra ATA | | 56Kbps | | ex. VAT | |
|---|---|---|---|---|---|---|
| 300MHz | 6GB | 64MB | Yes | Blueberry | £1,062 | ★★★★/8.5 |

**Pros:** Great design; fast enough for most.  **Cons:** Quite heavy; non-expandable.

| 300MHz | 6GB | 64MB | Yes | Tangerine | £1,062 | ★★★★/8.5 |
|---|---|---|---|---|---|---|

**Pros:** Great design; fast enough for most.  **Cons:** Quite heavy; non-expandable.

| 366MHz | 6GB | 64MB | Yes | Graphite | £1,190 | ★★★★/8.8 |
|---|---|---|---|---|---|---|

**Pros:** Great design; faster; top colour.  **Cons:** Quite heavy; non-expandable.

The iBook has been a hit ever since it was first unveiled at New York's Macworld Expo, last July. Almost immediately, it hit the top of the sales charts, becoming the number-one selling portable computer in the US retail market in October, November and December; it was released in September. The combined sales of iBooks and PowerBooks gave Apple a 10 per cent share of all portables in the US retail market. For all we know, the iBook is still up there knocking sales spots off Windows laptops right now.

In the UK, the iBook won the Best ICT Hardware (Secondary) award at January's BETT educational show. A year earlier, Apple had walked away with similar awards for the iMac.

Both the iMac and iBook achieved such success despite packing a pathetic 32MB of memory (RAM) – about enough to run the operating system and a Web browser. Mac-buying consumers had to go out and buy an extra bunch of memory chips almost immediately. Those that are still labouring away with just the installed RAM, don't know how powerful their iMac or iBook really is.

**Double up**  All new iBooks now ship with 64MB of RAM, which is really the bare minimum amount anyone should have. If you do more than browse the Web, email and word process on your iBook, you should consider upping that figure to a healthy 128MB (an extra £140). You'll be able to run more programs at the same time, and experience fewer crashes – most are caused by insufficient memory. If you really want, you can hike the iBook's memory to 320MB.

The original iBook also suffered the shame of having the smallest hard drive of all current Macs. So, today's new 6GB Ultra ATA hard drives are cause for extra satisfaction.

Like the original iBook, the new models all offer a battery life that Apple claims is "all-day" – up to six hours working time. Of course, they all also support Apple's super AirPort wireless technology for cable-free Internet and network access.

So, with its iBook upgrades, Apple has sorted out two previous limitations. But that's where the changes to the basic models stop. Everything else about the iBooks remains the same – why make wholesale changes to the number-one-selling portable computer? Hang on… what do I mean "basic models"? Is there a new iBook on offer now, too? Yes, Apple has repeated its successful move with the iMac – and released a Special Edition iBook at a premium price. (The iMac DV SE is the fastest selling model, despite the extra cost.)

The Blueberry and Tangerine iBooks enjoy the extra RAM and disk space, but retain the 300MHz G3 processor of the original. The iBook SE boasts a 366MHz G3 processor and addresses another oft-made criticism of the 'basic' model – its lurid colour scheme. Many observers found the bright blue and near-luminous orange iBooks too loud to bear. Coupled with its "handbag-like" appearance, these striking colours put off those potential male customers who weren't in touch with their feminine side… yeah, they said they looked sissy.

The iBook SE, on the other handle, is glad to be grey. Fitting in with the Graphite G4 Power Mac and iMac SE, this souped-up iBook is now more business friendly – with its sober colours still outshining all those dull Windows laptops. With the PowerBook staying exactly the same in appearance, many Macintosh users looking at portable options will pick the iBook SE for its refreshingly different looks.

The iBooks beat the PowerBook on several design levels. The lids – with attractive overmoulded rubber edges – open and close with a spring-loaded hinge, banishing easy-to-break latches. A handle makes lugging the portable around as easy as it is in a carrying case.

The 12.1-inch active-matrix TFT SVGA display is smaller than the PowerBook's 14.1-inch screen, but seems just as sharp – displaying millions of colours at an 800-x-600-pixel resolution. Modem and ethernet are exactly the same on iBook and PowerBook, as are the full-size keyboards. And the prices (starting at £1,249 including VAT) are much cheaper than the PowerBooks (starting at nearly £2,000 when you add VAT). To its credit, the PowerBook is slimmer and nearly half a kilogram lighter than the weighty iBooks, as well as packing fast FireWire connectivity and speedier G3 chips. The pro portable sounds better, with 16-bit CD-quality stereo input/output and two built-in stereo speakers, compared to the iBook's single mono speaker. Plus, the iBook has a CD, not a DVD drive.

### Macworld's buying advice

It's swings and round-bits in the battle between PowerBook and iBook. For those of us with portable needs less strenuous than digital video and heavy image editing, the non-expandable iBooks offer a cheaper, more design-conscious option – perhaps what we had hoped for in the new PowerBook. The bundled AppleWorks 6 business suite of applications and a few games makes each iBook even greater value. The Special Edition is Apple's best-looking portable ever – and the only time it hangs around is when you hold it by its handle.



**Safe port**
The 56Kbps modem, 10/100BaseT ethernet, USB and headphone ports are protected from the rough outside world by being sunk into the sturdy, rubberized case.

# Power Mac G4

## Apple's high-end pro desktops reach 500MHz. No other changes, but very, very fast…

| Processor<br>*PowerPC G4* | Hard disk<br>*Ultra ATA* | RAM | Zip<br>*100MB* | Modem<br>*56Kbps* | Price<br>*ex. VAT* | Star Rating |
|---|---|---|---|---|---|---|
| 400MHz | 10GB | 64MB | No | Yes | £1,099 | ★★★★/8.8 |

**Pros:** Fast; affordable; modem; DVD-ROM.  **Cons:** Could do with more RAM.

| | | | | | | |
|---|---|---|---|---|---|---|
| 450MHz | 20GB | 128MB | Yes | Yes | £1,699 | ★★★★/8.5 |

**Pros:** Very fast; Zip drive; modem; DVD-ROM.  **Cons:** 400MHz model better value.

| | | | | | | |
|---|---|---|---|---|---|---|
| 500MHz | 27GB | 256MB | Yes | No | £2,349 | ★★★★/8.7 |

**Pros:** Super fast; Zip drive; Cinema Display option; DVD-RAM.  **Cons:** Expensive.

It's grey. It's silver. It's see-through. It's the Power Mac G4. Be the envy of your friends and colleagues, laugh in the face of blue-&-white G3 Power Macs, humiliate owners of boring beige boxes… the G4 Power Mac is *the* status symbol in any modern-day professional office or studio.

On its original release, Apple made a big deal about Motorola's PowerPC G4 processor. It can execute over a billion floating-point instructions per second (officially making the Power Mac a "supercomputer"), and its Velocity Engine sub-processor promises to speed-up many multimedia operations by up to four times when applications are rewritten to take advantage of it. So the Power Mac G4 differs from the old G3 in more ways than mere case colour.

All G4 Power Macs are now based on the speedy Sawtooth motherboard, with three times the memory bandwidth of the old G3s, twice the PCI bus throughput, and 16MB ATI RAGE 128 graphics card installed in a dedicated AGP 2X graphics slot. The third FireWire port is internal, giving you the option of fitting a FireWire-based hard drive if you so desire. SCSI is nowhere to be seen – although you could install a SCSI card in one of the three PCI slots.

There are some similarities with the old blue-&-white G3 Power Macs – the case is an IT manager's dream. You can get inside the Power Mac by pulling a simple side-mounted latch. You can even rummage around inside while it's still switched on – although I wouldn't recommend it. Adding memory – a must on the 64MB entry-level model – couldn't be easier. The same goes for PCI cards, internal drives, etc.

Last October, Apple promised us a 500MHz G4 Power Mac – and the world went mad pre-ordering this most desirable of all desirables. The world went even madder when Apple postponed the 500MHz model and downgraded everyone's orders to 450MHz G4s… at the same bleedin' price, mind.

Apple put its PR blunder down to Motorola's failure to supply enough high-end G4 chips. Power Mac owners sulked – suddenly 450MHz didn't sound so powerful any more. But now, thank goodness, Apple and Motorola have pulled their fingers out and started shipping the half-gigahertz beast. And, yep, it's very, very fast.

As with any computer, chip speed isn't everything – that's why we test across processor, disk and graphics performance. Memory is also key to productivity. While the mid-range model boasts 128MB of RAM, and the high-end a weighty 256MB, the entry-level model has just 64MB – probably not enough for most Mac pros. Adding an extra 64MB should cost no more than £75, however.

The G4 Power Mac range now starts at 400MHz, speeds up at 450, and takes off at 500. Real style stallions can buy Apple's stunning 22-inch flat-panel Cinema Display with the high-end beauty – for a very cool £5,148 (excluding VAT). Other options include 100MB Zip drives (still no 250MB Zips, unfortunately) and 56Kbps modems – see the table above. The 500MHz model also features a 5.2GB DVD-RAM drive.

### Macworld's buying advice

With the 500MHz model now available, the G4 Power Macs are really living up to their "supercomputer" tag. When more software companies develop Velocity Engine-compatible versions of their products, the G4 should come into its own. The 400MHz model is fast and super-affordable – probably better value than the 450MHz version, unless you think the 10GB hard drive is a bit cramped. The unchanged case design is still the best in the business, the G4 whips the Pentium III at core tasks, Mac OS 9 comes for free, and it looks simply divine. **MW**

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## New Power Macs speed *and* design

While no great change from previous Power Macs in terms of features and design, the new G4 Power Macs nonetheless impress with expected speed increases.

☐ Best results in test.  Longer bars are better.

| Mac performance compared: | Processor | Disk | Graphics | Overall Score |
|---|---|---|---|---|
| Power Macintosh G4/500 | 1,596 | 2,145 | 4,609 | 2,783 |
| Power Macintosh G4/450 | 1,489 | 2,062 | 3,598 | 2,383 |
| Power Macintosh G4/400 | 1,408 | 2,231 | 3,480 | 2,373 |
| Power Macintosh G4/350 | 1,119 | 1,709 | 3,551 | 2,126 |
| Power Macintosh G3/450 | 1,398 | 1,340 | 3,588 | 2,109 |
| Power Macintosh G3/400 | 1,301 | 1,310 | 3,019 | 1,877 |
| PowerBook G3/500 | 1,531 | 1,323 | 3,030 | 1,961 |
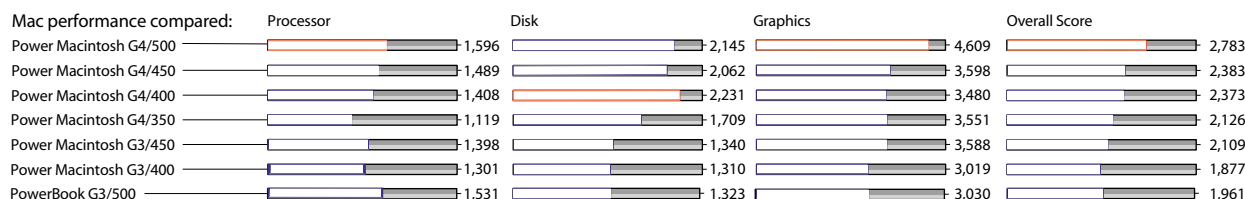
# Tip-top
# OS 9

Tips and tricks to help get the most from your Mac.
**By Franklin Tessler**

**A**pple keeps inventing new features for the venerable Mac operating system. Mac OS 9 includes a slew of enhancements that make your Mac more secure, easier to share, and more Internet-savvy. (For an introduction to all the new features, see "OS and them", December 1999, *Macworld*). True, Mac OS X is coming up sometime this year, but this radical new operating system won't be for everyone – at least not right away. If you have a pre-G3 Mac, OS 9 may be the most advanced OS your computer will ever run. And if your work is mission-critical – for example, you put out a publication every day on deadline – you may want to wait a while until Apple works out the kinks in OS X. In the meantime, let us show you how to make the most of OS 9, using these tips and tricks. We've also included a guide to avoiding common problems (see the sidebar "Terminate OS 9 troubles").

# Share over the Net

**M**aybe you use Macs at different locations – if so, you'll know there's nothing more frustrating than leaving a crucial file on the other computer's hard drive. With Mac OS 9 installed, exchanging files with a Mac on the other side of the world is as simple as accessing the computer in the next office – as long as both are connected to the Internet (and turned on). Here's a step-by-step guide.

### Step 1   Turn on AppleTalk
Do this in the Chooser or the AppleTalk control panel. AppleTalk must be active for TCP/IP file sharing to work under OS 9, even if you don't have an AppleTalk network.

### Step 2   Activate File Sharing
You'll find this option in the File Sharing control panel. Make sure to set up access privileges for anyone who needs to use your Mac. (OS 9 folds the functionality of the old Users & Groups control panel into File Sharing).

### Step 3   Decide what to share
In the Finder, select the volumes and folders you want to share, and specify access privileges using the Sharing section of each item's Get Info window.

### Step 4   Get both computers online
Make sure the computer with which you want to share files is connected to the Internet, and write down its IP address from the TCP/IP control panel.

### Step 5   Set-up the other Mac
At the other end, open the Chooser and select AppleShare. Click on Server IP Address and enter the numeric IP address from Step 4. Specify the items you want to share, enter the host computer's password, and you're done. To save time, make an alias of the shared volume or folder; that way, you won't have to re-enter the host IP address to reconnect. You can also add AppleShare servers to your Keychain so you no longer have to remember the servers' passwords.

## Tighter security

Your files and other personal information are vulnerable to tampering, especially if you're-connected to the Internet with fast-network technologies that are always on, such as cable or DSL (Digital Subscriber Line). Keep your secrets safe with two of the new OS's best features, Keychain passwords and built-in file encryption.

**Pick your password** One feature in OS 9 may solve the problem of proliferating passwords. No longer will you be tempted to use the same memorable password for all your log-ons. And you won't have to scribble obscure – and fiendishly forgettable – ones on random pieces of paper anymore, either. OS 9's Keychain – a feature resurrected from System 7 Pro – stores them all in one convenient place, under the protection of a master password.

To create a Keychain, go to the Apple menu, choose Control Panels, and then select Keychain Access. Click on Create in the dialogue box that appears. Name your Keychain, and type your master password. Beware: Hackers commonly run programs that try every word in the dictionary to crack into people's computers. Unfortunately, they don't usually have to try too hard, since many people use the word "password".

**Unlock file servers** To add a file-server password to your Keychain, first make sure you've unlocked the Keychain using the pop-up menu in the Control Strip's Keychain module. Then simply follow the steps you always do to log onto your file server. To the right of the field where you usually enter your password, you'll see the Add To Keychain check box. Once you've selected this, you'll

never have to remember that particular password again (unless, of course, you have a serious system crash – but heck, that's why you back up your computer regularly . . . right?).

**Unlock the Net** One of the most promising uses for the Keychain is to store all your Web passwords. Unfortunately, at this point you can do this only with a handful of password-protected sites, mostly associated with professional organizations (for example, The Chronicle of Higher Education's site, **www.chronicle.com**). Those few Web sites let you log on in a browser-generated dialogue box, rather than via a form embedded in a Web page.

Still, if you commonly visit a site like this, give it a try. To add a Web site to the Keychain when you're using Microsoft Internet Explorer, go to the site and sign on using your name and password. After you're transferred to a new page confirming a successful log-on, drag the URL from your browser's address field to the Mac desktop. If you use Netscape's browser, you have to copy the URL into a word processor or text editor before dragging it to the desktop. Finally, drag the URL from the desktop into the open Keychain Access window, which prompts you to re-enter your user name and password. From then on, you can use the Keychain to sign onto the Web site without re-entering your information.

Web surfers who need more than the Keychain can offer may want to try Alco Blom's $25 shareware utility, Web Confidential (**www.web-confidential.com**). This handy program, which also stores account numbers and other sensitive information, lets you add password-protected Web sites to a new menu that appears in your browser's menu bar.

**Don't get caught sleeping** It's a good idea to set your Keychain to lock automatically when you step away from your Mac. After all, what's the good of a key if you leave your door unlocked? To do this, open the Keychain Access control panel and unlock the Keychain. From the Edit menu, choose Keychain Settings (the actual menu item will be the name of your Keychain, followed by Settings) and re-enter your Keychain password. At the bottom of the resulting window, you'll see an option to lock the Keychain after however many minutes of inactivity you choose. If you're using a PowerBook or iBook, also choose the Lock When The System Sleeps option.

**Protect Your Keychain** Guard your Keychain as scrupulously as Bond would guard the keys to the British Secret Service headquarters. Unfortunately, with OS 9's Multiple Users feature turned on, you can unintentionally lose access to the Keychain. If you use the Keychain control panel to change your password, you will no longer be able to unlock it. The secret is, always change your password from the Multiple Users Log-on window.

**Take your keys with you** When you travel, carry your passwords with you by copying the Keychain file to a floppy disk or other removable media. On your own computer, you will find this file in the Keychain folder inside the Preferences folder of your Mac's System Folder. When you're using another computer as a visitor (see the discussion of the Multiple Users feature that follows), the Keychain file goes in a different place – your personal folder in the Users folder at the root level of the hard drive. Once you find your folder, look inside for the Keychain Preferences folder; put the Keychain file there.

**Encrypt your files** James Bond wouldn't leave sensitive files out in the open, and you shouldn't either. OS 9's file-encryption feature lets you protect files you don't want others to see, such as those containing your Quicken data or personal memoirs.

To encrypt a file, select it in the Finder and choose Encrypt from the File menu, or control-click on the file to bring up the contextual menu. Enter a password at least five characters long. A check box (selected by default) lets you add the password to your Keychain, so you don't have to choose a phrase that's easy to remember. You can spot an encrypted file by the small gold key on its icon. To decrypt a file, simply double-click on it.

Unfortunately, you cannot encrypt folders. But you can get around this by using Aladdin Systems' (**www.aladdinsys.com**) DropStuff, a compression program bundled with Mac OS 9. Drag the folder you wish to encrypt on top of the DropStuff icon, wait for the files to compress, and then encrypt the resulting file. When you want to decrypt the folder, just double-click on it and enter your password.
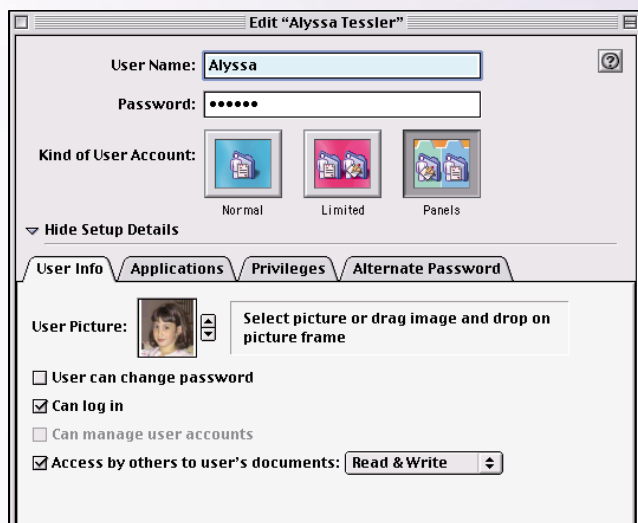
**Her own image**
*If you're using OS 9's MultipleA Users feature, there's an easy way to make it more fun for the youngest members of your family to log onto your Mac. Include their photos in the log-on screen.*



**Dual personality**
*CDs and DVDs that have separate audio and video tracks appear as two icons on the Mac desktop. You must trash the audio-disc icon if you want to add the disc to the master list of approved titles for your kids.*

After you decrypt a compressed folder, your Mac may ask which application to open it with. Choose StuffIt Expander – a decompression program from Aladdin Systems, also bundled with Mac OS 9.

**Decrypt without viewing** When you open an encrypted file, the Mac OS launches its related application. If you're short on time and don't need to see the file, however, you can decrypt it without viewing it. Open it with the Apple File Security program, which you'll find in OS 9's Security folder inside the Applications folder. Or, if you're already running Apple File Security, simply drag the file onto the program's icon.

### Multiple-User secrets

Anyone can access a Mac running OS 9 by booting from an alternate start-up volume, but OS 9's Multiple Users feature does a lot to protect you against low-tech attacks on your sanity. For example, Multiple Users can ensure you'll never have to worry about your kids leaving the desktop in disarray.

**Maintain a secret identity** The Multiple Users feature lets you set up a Mac so that more than one person can use it, each with his or her own private set of options, preferences, and files. For example, if your children use your Mac, you won't have to worry about important documents disappearing. Turn on and set up the Multiple Users option by selecting the Multiple Users control panel. The dialogue box that appears asks you to decide what kind of access different users will have to the computer (you're considered the Owner and have full access): Normal (access to just about everything), Limited, or Panels (very basic access, with a simplified interface, ideal for kids and computer novices).

No matter what kind of access they have, whenever they log on, users will see the desktop just as it was when they logged out, regardless of who else used the computer in the meantime.

**Make a photo ID** The Multiple Users feature means the youngest members of your family can use your computer with ease. To help them get started, paste their photograph in the log-in screen. That way they won't even need to read their name to choose the account.

To add a custom picture, open your child's Setup window in the Multiple Users control panel and click on the small triangle to display setup details. Next, in any Web browser, open the file containing the child's picture. Finally, drag the picture from the browser window onto the picture frame (see the screen shot "Her own image").

**Restrict CD access** Worried about what kinds of games
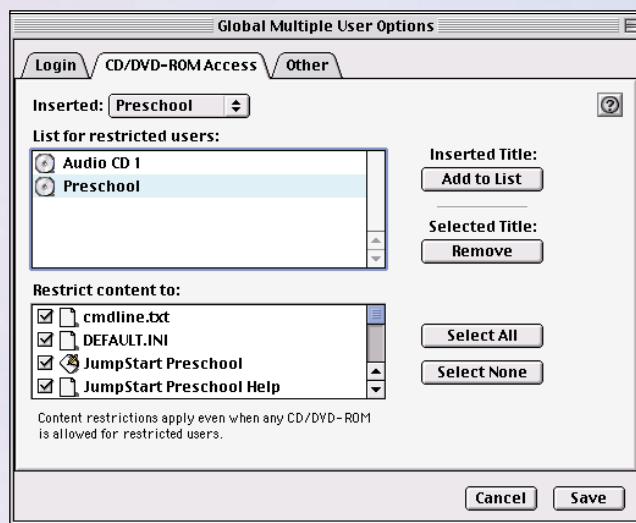
*Mac OS 9 may not be Apple's most mind-blowing upgrade, but if you take advantage of these tips and shortcuts, you may find that its security features, in particular, can set your mind at ease.*

your kids are playing? Multiple Users lets you control just what CDs and DVD-ROMs they can use. If you decide to restrict access, you'll need to make a master list of approved titles. To do this, click on the Options button in the Multiple Users dialogue box. Click on the CD/DVD-ROM Access tab, and then insert a disc into the computer and click on the Add To List button. You can add a disc as a whole, or only specific items on it. (Of course, this can be time-consuming if you have a large library).

Be aware that discs with separate audio and video tracks have two icons on the Mac desktop, one for the audio and another for the application (see the screen shot "Dual personality"). You have to drag the audio-disc icon to the Trash before you add the disc to your master list – otherwise you won't be able to select the CD's program content.

**Avoid the Cancel trap** A gaping security hole in OS 9's Multiple Users software lets other users access your Mac without your password. How? If you set Multiple Users to log out after a specified period of inactivity, and you have any open documents with unsaved changes, OS 9 asks if you want to save changes or cancel: anyone who chooses to cancel gets full access to your computer. To avoid this pitfall, save all documents before you walk away from your Mac.

**Install applications carefully** Some applications don't co-exist peacefully with OS 9's Multiple Users feature. For example, the first time you run any Microsoft Office application, a special installer program copies shared libraries and other software components to your hard drive. Users that can't access the installer won't be able to run the main application.

To prevent this, always install applications using the Owner account and make sure they function properly before you grant access to other users. America Online users, take note: Those with Limited and Panels access will not be able to get online unless the Owner moves the entire AOL application folder to the Application Support folder inside the System Folder.

### Solve Mysteries with Sherlock 2.0

To help you dig for information on your hard drive or the Internet, OS 9 ships with an updated version of the Sherlock search engine. Although the QuickTime-inspired interface is drawing its share of criticism, there are plenty of new tricks worth cheering about.

**Customize channels** Sherlock 2 helps you find information on the Internet by confining your searches to groups of

# Terminate Mac OS 9 troubles

From Sherlock 2 to Multiple Users, there's no doubt that Mac OS 9 has much to recommend it. However, as with any operating-system upgrade, you'll need to watch out for a few thorns hidden among the roses. These tips will help you make sure your upgrade is as smooth as possible. For even more troubleshooting help, go to www.macfixit.com.

## Tip 1
**Avoid Application conflicts** It's the upgrade chain-reaction: you upgrade your OS, you launch Microsoft Word – or some other program you depend on – and it crashes. Again and again. What you've got is an application conflict, common to any OS upgrade. And the only solution is to upgrade all your existing programs. Like any other operating-system updates, OS 9 has its fair share of these conflicts – and one new snag: Error Type 119.

The origin of this problem lies in changes Apple made to the way the Mac OS keeps track of files. The good news is, you can now open larger files and have more files open at once (a maximum of 8,169) than you could with any previous version of the OS. The catch is that some software will still attempt to track files using the old method – and they won't be there. The result? Error Type 119.

Adobe quickly released fixes for a couple of its popular applications, Adobe Type Manager (both the free and Deluxe versions) and Adobe Type Reunion (the fixes are available on this month's *Macworld* cover CD. If you don't think you use Type Manager, be aware that some other graphics programs, such as Multi-Ad Services Creator and Creator 2, install and use it in the background. The Error Type 119 bug also bit Netscape Communicator. However, in this case you can fix things without an update: just remove the Talkback folder from the Communicator folder. Even Apple's own software is not immune: you'll need the AppleWorks 5.0.4 Updater (included on the Mac OS 9 CD) to bring AppleWorks up-to-date. To find other less obvious but equally stricken programs, download and run Alsoft's handy free utility, the Mac OS 9 File Manager Compatibility Checker . You can find it at www.alsoft.com/AskAl/download.html.

## Tip 2
**Conquer Control Panel confusion** Another kink you'll encounter is that a few control panels don't get along well with Mac OS 9. Some older control panels traditionally loaded into the same memory space the Finder uses. This used to be OK, but Mac OS 9 requires control panels to open in their own memory space, so these older control panels will not function.

Fortunately, Apple built a solution into Mac OS 9. You can force the Mac to let older control panels open in Finder memory space by holding down the ⌘ and control keys while double-clicking on the control-panel icon. You'll need to do this to use the Customize command of Microsoft Office 98's Office Manager, for example.

## Tip 3
**Decode the mystery of disappearing folders** At some point after you install Mac OS 9, a folder's icon may mysteriously change into a blank-document icon. When you try opening this folder, you get a cryptic message that says: "The package could not be opened. Try reinstalling the package."

A package is OS 9's way of grouping an application and related files (such as its Help files) into a single folder. The Finder views a package almost as an application. That is, the package acquires the icon of the application, and when you double-click on it, the application is launched. All the additional files in the package are hidden from view, so you cannot modify or delete them.

What's happening is that an ordinary folder has been mistakenly set to be recognized as a package (Apple claims that this could happen after a system crash). This leads to the error message and the blank icon. Thankfully, Apple has provided a simple fix. All you have to do is drag the problem folder's icon to the Package First Aid utility (which you'll find hidden at the bottom of the Utilities folder on the OS 9 CD). Package First Aid then returns the folder to its ordinary status.

## Tip 4
**Defuse DVD dangers** There's a special OS 9 problem just for iMac DV owners. If you upgrade from OS 8.6 (the OS that comes loaded on most of these Macs) to Mac OS 9 by doing a clean install, you will discover that DVD Player no longer works. Instead, whenever you try to access the player, you'll see the error message "DVDRuntimeLib could not be found."

To avoid this, simply drag three critical DVD extensions – DVD Navigation Manager, DVD Region Manager, and DVDRuntimeLib – from the Extensions folder in your old System Folder to the same folder in your new one.

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related sites, called channels. Mac OS 9 ships with six built-in Internet-searching channels: Internet, People, Shopping, News, Apple, and Reference. You can create your own channels with other Sherlock plug-ins. (Apple maintains a repository of plug-ins at www.apple.com/sherlock/plugins.html).

You can add a new plug-in to any channel by dragging it into the channel's window. To copy a plug-in from one channel to another, option-drag it to the new channel. (If you try to delete one of the built-in channels, however, Sherlock resurrects it from the Internet).

**Find files faster** Sherlock 2's revamped Files channel adds welcome new possibilities. When you type ⌘-F in the Finder, Sherlock launches with the Files channel selected and mounted volumes displayed in a list. To restrict your search to a particular folder or group of folders, drag them onto the Volume window.

**Customize file searches** Dragging any file, folder, or volume into Sherlock 2's More Search Options window copies its attributes into the search fields for quick customized searches. You can even save search criteria in Sherlock's pop-up menu for easy access – handy if you regularly search for files within a certain size range, for example.

## OS 9 grab bag

In addition to improvements in security, file sharing, and searching, Mac OS 9 boasts an array of other enhancements that make the Macintosh more entertaining and convenient to use.

**Take the secret entrance** In OS 9's About This Computer window, you can do more than see how much memory the system and any running applications are using. Open files by dragging them onto the appropriate application in the window; double-click on the Mac OS icon to open the System Folder.

**Enjoy the sights and sounds** OS 9 splits the functions of Mac OS 8's Monitors & Sound control panel into two separate panels. The new Sound control panel offers several entertaining new stereo alert sounds – such as ChuToy (a squeak familiar to dog owners), Laugh (a child's giggle), and Purr (which sounds suspiciously like a Star Trek tribble) – and also lets you balance the stereo speaker volume by playing white noise through one speaker at a time. Horror of horrors, Apple has dumped the mighty Quack.

**Set up speedy shortcuts** On newer Macs, including iMacs, iBooks, bronze-keyboard PowerBook G3s, blue G3s, and G4s, you can use OS 9's Keyboard control panel to program the function keys to open any application or document.

**See the Campus** Option-click on your Apple menu and choose About The Finder from the contextual menu to get a view of the Cupertino locale where the magic happens.

## The last word

Mac OS 9 may not be Apple's most mind-blowing upgrade, but if you take advantage of these tips and shortcuts, you may find that its security features in particular can serve to set your mind at ease. It's not enough just to get your work done – you should have fun in the process. **MW**

# Prints charming

Photo-quality printing is an ink-jet speciality – and it's getting cheaper.
**By David Fanning & Seth Havens**

Unlike business printing, home printing tends to value quality above speed – which is why the consumer printing market is ruled by ink-jet models, and not laser printers.
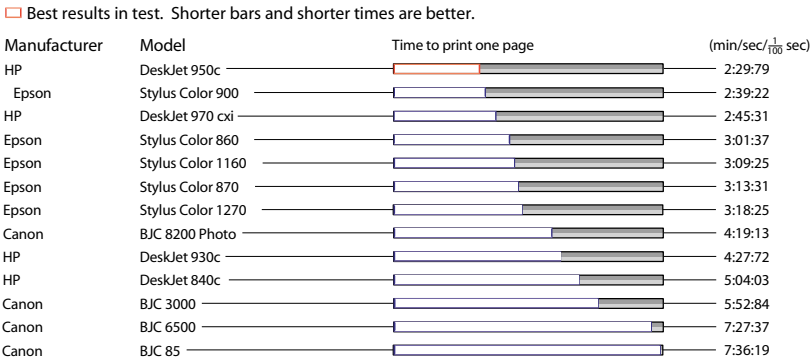
Here, we take a look at the current crop of ink-jets for home and office work. Epson has traditionally dominated this arena, with little competition. But with notable releases in the past year, both Hewlett-Packard and Canon have become key ink-jet players. Although Epson still has the largest range of printers, at least it's being outstripped in certain areas.

Printing technology revolves around useage. Laser printers offer fast and furious text output, ideally suited to office donkey-work. Ink-jets offer a more sedate pace, and the pay-off is high-quality colour images. Ink-jets lack the luxuries associated with laser printers – such as ethernet networking – because most are an expense not justified in home use. Also, PostScript is almost never found in ink-jet printers, making printing from vector-graphics applications or page-layout programs best avoided. There are a number of solutions to the PostScript problem, but most are software-based and make the printers even slower.

The area in which ink-jets excel is photographic-quality printing. Even five years ago, manufacturers were claiming their printers capable of photo-quality images – which back then, was stretching the truth. Now, though, images from certain models are indistinguishable from a real photo.

# Ink-jet speed shootout

| Manufacturer | Model | Time to print one page | (min/sec/$\frac{1}{100}$ sec) |
|---|---|---|---|
| HP | DeskJet 950c | | 2:29:79 |
| Epson | Stylus Color 900 | | 2:39:22 |
| HP | DeskJet 970 cxi | | 2:45:31 |
| Epson | Stylus Color 860 | | 3:01:37 |
| Epson | Stylus Color 1160 | | 3:09:25 |
| Epson | Stylus Color 870 | | 3:13:31 |
| Epson | Stylus Color 1270 | | 3:18:25 |
| Canon | BJC 8200 Photo | | 4:19:13 |
| HP | DeskJet 930c | | 4:27:72 |
| HP | DeskJet 840c | | 5:04:03 |
| Canon | BJC 3000 | | 5:52:84 |
| Canon | BJC 6500 | | 7:27:37 |
| Canon | BJC 85 | | 7:36:19 |

## Behind our tests

All the printers were tested using the same computer to print from. To enable testing of both USB and serial printers we used a Power Mac 9600, fitted with a Keyspan USB card. For low-resolution output, we printed at the fastest setting available for colour printing. For high-resolution output, we printed at the maximum-quality setting. Mono text was simply a page of text printed without colour.

## Jet speed

Printing speed on laser printers is a measure of print-engine capability. Ink-jet printers have little on-board processing, with the work being mostly executed by your Mac. This means if you have a slow computer, you will also suffer sluggish print speeds.

All the printers tested here use a USB connection, meaning information-transfer is faster than on older Macs with serial connections. This means that print speeds are acceptable, even when printing at super-high resolutions. Occasionally, pages take longer – for instance, with high-coverage output and when printing to A3.

Printer manufacturers often trumpet page-per-minute stats, something more meaningful when applied to laser printers than with less-predictable ink-jets. Ink-jets can output low-res, text-heavy documents with alacrity, but when processing an entire A3 page of high-resolution colour, print-speed is better measured in pages per-hour than per-minute.

Our speed tests were carried out under lab conditions: the same files were printed from the same Mac – giving reliable speed ratios without pinning down page-per-minute figures for each model. Consumers would be better placed to assess various models if manufacturers were to do the same.

## Jet settings

Each manufacturer has its own proprietary printing technology, and each uses different methods to attain the best quality image. These methods rely on factors such as ink-type, paper and the way ink is fired at the paper.

Epson uses a Micro Piezo printer head, capable of 1,440 dots per inch (dpi). There are two types of Epson printer: Color and Photo. The Color printers use a four-ink

### HP DeskJet 840c

The cheapest printer on test was the DeskJet 840. An easy assumption would be that its quality was also the poorest – yet nothing could be further from the truth. In fact, on quality, the 840 made it into the top half of our scores. Although it isn't about to knock any Epson off its perch, the 840 represents unbeatable value for money.

Its colours are rich, although images are less sharp than those from other printers. All images were fairly grainy too, yet you don't have to step back too far from a page for this to be invisible to the naked eye. If speed is an issue, then this printer is not for you. It's slower than most models tested.

**Macworld buying advice**
If you want a better printer than this, then you need to pay at least another £100 for something in the Epson range. This makes it an ideal choice for anyone on a tight budget. You won't be able to output fantastic glossy photos, but it's capable of fine plain-paper images.

If text is all you need, then it does a great job of that too.

| Price | £99 (inc. VAT) |
|---|---|
| Print quality score | 73 per cent |
| Maximum resolution | 600dpi |
| Maximum paper size | A4 |
| Manufacturer | Hewlett-Packard |
| Contact | 0990 474 747 |
| Web address | www.hp.co.uk |
| Star Rating | ★★★★/8.2 |

process, and the photo versions use six inks. The additional two inks are light cyan and light magenta, both used to build up a wider gamut of colour.

One revolutionary feature of the newest Photo models is light-proof inks. Previously, ink-jet output was prone to fading, and so was unsuitable for the photographic market. After all, what's the use of printing wedding photos that will fade after six months – unless you're Melanie and Ian Beale? With the new inks, prints will remain

### HP DeskJet 930c

One thing sets this printer apart: its price. At £149, it's one of the cheapest printers on the market. Unfortunately, its output also looks like it comes from one of the cheapest printers on the market.

The quality simply isn't there. It couldn't even compete with the Canon range – which is saying something. To add insult to injury, it was even outclassed by the HP DeskJet 840 – a £99 printer from the same range.

I normally try to find one redeeming feature in any product – but with this one it's difficult. HP has carefully spaced out its printers to fit into price brackets that increase by £50 increments – from £99 to £249. Unfortunately, quality is not so neatly pigeonholed – and this model throws everything out by being worse than the £99 version. This begs the question: what, exactly, is the consumer spending the extra £50 on? Are the parts more expensive?

**Macworld buying advice**
Either save yourself £50 and buy the DeskJet 840, or shell out an extra £50 and buy an Epson Stylus Color or Stylus Photo.

| Price | £149 (inc. VAT) |
|---|---|
| Print quality score | 51 per cent |
| Maximum resolution | 600dpi |
| Maximum paper size | A4 |
| Manufacturer | Hewlett-Packard |
| Contact | 0990 474 747 |
| Web address | www.hp.co.uk |
| Star Rating | ★★/4.9 |

colour-fast for a minimum of ten years.

Although the 2,400dpi Hewlett-Packard 970cxi out-performs everything in the Epson range by almost 1,000 pixels per inch, HP says that printing at just 600dpi will deliver the same quality as this top resolution.

This feat is achieved by HP's PhotoREt III technology, which ensures each dot is itself made up from 29 drops of ink. This gives smooth, noise-free colour gradients. In our tests, the 600dpi print from the HP

### HP DeskJet 950c

At £199, the HP DeskJet 950c is in direct competition with both the Epson Stylus Color 860 and 870. On quality, it came behind these two – but only by a small margin. Its colours were rich, but rather dark. Although this is something that can be addressed in software, there should be no need to do so. There was also some banding and graininess, although images were sharp.

The DeskJet 950c excels on speed: it was the undisputed champion on plain paper, putting it in competition with the Epson 900 – but for £80 less. The 950c fills the narrow gap between the speed of the Stylus 900 and the quality of the Stylus 860. A thing we prefer about HP printers is the way they handle paper. The paper tray is positioned under the output tray, which reduces dust. Others expose paper to the open air, and the resulting dust-fall can adversely affect output quality.

**Macworld buying advice**
If you want the fastest printer, then this is it – and it's cheaper than the pricey Epson Stylus 900. Quality is better than average – but poorer than the sharper photo printers.

| Price | £199 (inc. VAT) |
|---|---|
| Print quality score | 75 per cent |
| Maximum resolution | 600dpi |
| Maximum paper size | A4 |
| Manufacturer | Hewlett-Packard |
| Contact | 0990 474 747 |
| Web address | www.hp.co.uk |
| Star Rating | ★★★★/8.3 |

970cxi compared favourably with the 1,440dpi print from the Epson. And because the HP prints at a lower resolution, it can output at almost twice the speed of the Epson working at full resolution.

Canon has a third way of dealing with photo colour, allowing its BJC 6500 to be used for across-the-board printing jobs. It can handle a glossy photographic image, because the user can replace its inks with

### HP DeskJet 970cxi

Although Epson's reign as champion of the ink-jet market is well-deserved, a degree of worthy competition is essential. We had high hopes for the DeskJet 970cxi, and saw it as a potential "Epson killer". In our tests the 970 performed very well – but failed to topple Epson from its top spot. It came close – splitting Epson's photo printers – the 1160 and the 860 – in our double-blind output-quality tests. This is all the more impressive, considering that these two Epson models possess identical functionality.

Functionality may eventually edge the HP ahead of the market leader. The DeskJet 970cxi's duplex function is a good start, albeit a tad slow. HP also claims its printers use less ink than the Epsons. Although we were unable to substantiate this, such a feat would be a big money-saver: printer inks are horrifically expensive.

**Macworld buying advice**
This printer fought gallantly against the Epson Stylus Photo range. It's at least as good as the Stylus Color range on quality, plus it has nifty features such as a duplex unit.

| Price | £249 (inc. VAT) |
|---|---|
| Print quality score | 82 per cent |
| Maximum resolution | 2,400dpi |
| Maximum paper size | A4 |
| Manufacturer | Hewlett-Packard |
| Contact | 0990 474 747 |
| Web address | www.hp.co.uk |
| Star Rating | ★★★★/8.7 |

design

breakdown

specs

# Editors' choice

## Epson Stylus Photo 1270

We were unprepared for how much this model impressed us, hardly expecting Epson to be capable of much improvement over last year's offerings. But the company has excelled itself, with its quietest, fastest and – most importantly – best-quality ink-jet printer ever – at least in this price range.

I thought that Hewlett-Packard might snatch top spot from Epson this year: its DeskJet 970cxi is a quantum leap ahead of the last HP printer I tested. But even though the 970 is such an improvement, it still can't compete with the new-generation Epsons. Canon was never a contender – but even the improvements in its latest models have failed to prevent it falling even further behind Epson.

The A3-capability on the Stylus Photo 1270 means you can print light-proof poster-size images. This means that those luscious, glossy posters for your bedroom wall or gallery will not be washed-out and pale in weeks, as with output from other A3 printers.

The Stylus Photo 1270 – and the 870 – use a new ink that is colour-fast for at least ten years. This opens up a whole new market for photographers and artists. The confidence to create long-lasting digital photographs will be a boon to both the printer and digital-camera industry. It's a misconception that photographs are less likely to fade: the life of a photograph is affected by whether it is placed behind glass, or continually exposed to direct sunlight. If you care for your prints from the Epson, they will last as well as photographs. And, should output eventually fade, you can always keep the file and print out another version.

For more on independent tests of colour-fast inks, visit **www.wilhelm-research.com.**

Another new feature of the 1270 is its almost-silent operation. I've heard printers described as "silent" in the past – but this one really is noiseless. Any noise it may have made was drowned out by the fan in the G3 we used for testing.

The most important thing with a photo-printer is quality. Our printer killer-test brought many printers to their knees, with most falling over on long gradations from black to purple. A number of the models also suffered from banding on this test too. The 1270, though, showed a perfect, continuous tone. There was zero banding and zero graininess – a matchless performance.

This printer will meet – and probably exceed – your photographic printing needs. It can also perform regular text-prints and does a great job of monochrome pictures. At just £340, it's cheap for an A3 printer. There are very few reasons for not buying this model.

*Epson 1270*
*It may boast new inks, but Epson still insists on producing colour cartridges that inevitably mean lots of wastage.*

| Price | £399 (inc. VAT) |
|---|---|
| Print quality score | 9o per cent |
| Maximum resolution | 1,440dpi |
| Maximum paper size | A3 |
| Manufacturer | Epson |
| Contact | 01442 261 144 |
| Web address | **www.epson.co.uk** |
| Star Rating | ★★★★★/9.1 |

## Epson Stylus Photo 870

If you can't afford the price or space needed for the luxurious Stylus Photo 1270, the 870 offers identical quality, but at A4 size.

It's identical in most ways other than size. It has the silent-running stepper-motor that prints your images discretely with no noise. It also uses the colour-fast inks for longer-lasting prints. One downside to Epson printers is the three- and five-colour ink-cartridges that are used across the range. This means that, when one of cyan, magenta or yellow runs out, the entire cartridge has to be replaced – even if there's plenty of the other two, or four, left. Because one ink will invariably run low before the others, this can be wasteful. Inconveniences aside, this printer's output is truly outstanding.

### Macworld buying advice

As this printer is functionally identical to the Stylus Photo 1270 I can recommend it with equal enthusiasm. Although Epson's A3 model is more flexible, the 870 still represents great value. It's smaller too – making it more attractive to space-conscious customers. Home or office users now have true photo-quality prints within their grasp.

| Price | £240 (inc. VAT) |
|---|---|
| Print quality score | 90 per cent |
| Maximum resolution | 1,440dpi |
| Maximum paper size | A4 |
| Manufacturer | Epson |
| Contact | 01442 261 144 |
| Web address | **www.epson.co.uk** |
| Star Rating | ★★★★★/8.9 |

## Epson Stylus Color 860

The Stylus Color 860 is the baby version of the 1160, and, as such, ought to be functionally identical. Curiously, however, in our double-blind tests, the 860 out-performed the 1160 on quality. Interestingly, the HP 970cxi snuck in between them. This illustrates how close the all-important race for quality is. Discernable differences in quality in much of the test-output was negligible, and our testers were often hard-pushed to rank output in order of preference. In every other aspect of functionality, the 860 more closely matches the 1160. Its speeds at all resolutions were a whisker ahead of the A3 model.

### Macworld buying advice

Although the 870 has the edge on quality, the Color 860 produces more-than-satisfactory output, is ten seconds faster, £30 cheaper – and has a cash-saving four-colour cartridge. Compared to the speedy Color 900, this model is slower by 20 seconds. But speed is a minor concern; ink-jets are about economical quality. The 860 may be slower, but it's much cheaper and its output is far superior to that of the 900.

| Price | £199 (inc. VAT) |
|---|---|
| Print quality score | 85 per cent |
| Maximum resolution | 1,440dpi |
| Maximum paper size | A4 |
| Manufacturer | Epson |
| Contact | 01442 261 144 |
| Web address | **www.epson.co.uk** |
| Star Rating | ★★★★/8.8 |

## Epson Stylus Color 900

Although the 900 is the oldest in the Epson range it's still the manufacturer's fastest printer. However, the HP DeskJet 950 shaved a few seconds off the Stylus Color 900's performance to scoop the speed prize.

Unfortunately for Epson, the 900 also lost out to the HP 950 on quality. This is due to its age: at more than a year old, this model is an old-timer in ink-jet terms. Its previously reasonable price of £279 now looks shockingly high, making it unattractive to all but the most speed-hungry punter.

Its poor colour-rendition is caused by a four-ink system that is a generation behind current ink technology. Because it's an office printer, much of its output is likely to be monochrome text. Indeed, text output from the 900 is fine, and, if you're only interested in printing the odd colour logo in addition to text, then the 900 is up to the job. However its price can't be justified, considering what's on offer from the competition. It should be put out to grass, or slashed in price.

### Macworld buying advice

At £150, this printer would be a bargain. At £279, it's a dud.

| Price | £328 (inc. VAT) |
|---|---|
| Print quality score | 58 per cent |
| Maximum resolution | 1,440dpi |
| Maximum paper size | A4 |
| Manufacturer | Epson |
| Contact | 01442 261 144 |
| Web address | **www.epson.co.uk** |
| Star Rating | ★★★/5.2 |

## Epson Stylus Color 1160

In theory, the Stylus Color 1160 is the business equivalent of the Stylus Photo 1270. This means its emphasis is on speed, rather than quality. It is speedier than the 1270 and is only beaten at 600dpi by a couple of the HP models. What we liked about this model is that very little quality has been sacrificed in the bid for speed.

In the qualitative tests, the 1160 fared extremely well. It doesn't boast a six-ink system, yet, on quality, still beat many so-called photo-capable models from competing manufacturers. I expected the killer-tests to at least show up some obvious banding in colour gradations, but banding was only observable at magnification. This is impressive.

### Macworld buying advice

You'll save a little time and just over £40 by choosing this model over the Stylus Photo 1270. If you need A3, then it's streets ahead of the only other A3-capable model – the Canon BJC 6500. There may be savings on inks and paper too, because office printing rarely requires the expensive glossy photo paper demanded by home consumers.

| Price | £348 (inc. VAT) |
|---|---|
| Print quality score | 80 per cent |
| Maximum resolution | 1,440dpi |
| Maximum paper size | A3 |
| Manufacturer | Epson |
| Contact | 01442 261 144 |
| Web address | **www.epson.co.uk** |
| Star Rating | ★★★★/8.6 |

special six-colour cartridges, giving top-quality prints. This gives the best of both worlds: four-colour and six-colour printing in a single model. But the quality of the Canons failed to keep pace with even the low-end Epsons. On speed too, Canon lags behind most of the competition.

## Test jet

We tested every printer at every available setting, using three files: one was a 1,440-dpi photo collage; another, the same collection of images at 720dpi; and a printer-killer file of solid colours and marked gradients jumbled with monochrome photographs. That last file is almost impossible for printers to get right, and serves to amplify any minor glitches.

To rate the output, a panel of judges was given these printouts to place in order of preference. We also judged prints using a magnifying glass and scanners, in order to
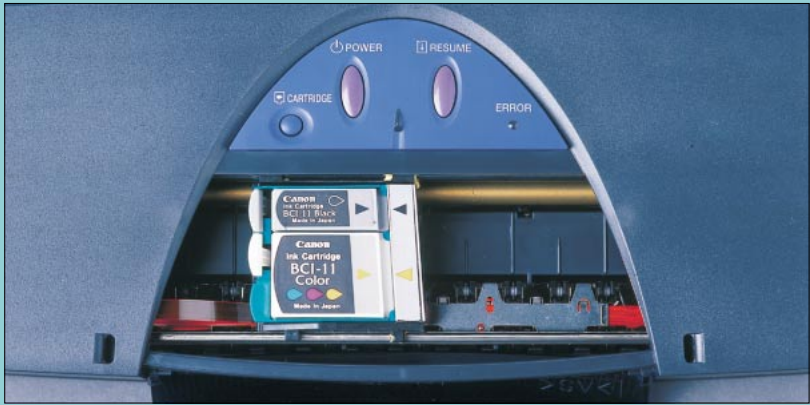
**Packing a punch**
*The Canon BJC 85 is a tiny machine, fitting easily into most hand luggage. Even more impressive than its size is its flexibility: the four-colour system shown above can be swapped for a larger mono cartridge, a photo-optimized colour cartridge, or even a scanner.*



**Six appeal**
*Responding to demand for photo-quality printers, Canon includes an extra two inks with its BJC 8200 – photo-cyan and photo-magenta. Although the performance of this six-ink printer is disappointing, at least the inks come in separate tanks – something that cuts down on expensive ink-wastage.*



**Scan do**
*With the Canon BJC 3000 comes a scanner add-on that – while it will never compete with a flat-bed scanner – is darned convenient and did manage to output more-than-acceptable images. It's ideal for those who require just workaday scans, or who are hamstrung by limited desk space.*

## Canon BJC 3000

The BJC 3000 is aimed at the business market, and claims to be "economical and fast". At £119, it resides at the cheaper end of the ink-jet scale and, for the money, it's a pretty good deal. Its images aren't the best, but are acceptable for non-photographic use. Solid colours are flawed and banding is obvious, but there are real plus points.

The ink used in the BJC 3000 comes in individual cartridges, meaning there's less wastage. Other manufacturers use a black and a single-colour cartridge. Canon tends to use separate inks, meaning if you run out of blue, you can replace just the blue cartridge. On other printers you'd be obliged to replace all of the colours. Also, the scanner cartridge actually works very well. It's a bit of a hassle having to keep changing cartridges, but the added functionality is handy.

### Macworld buying advice

As a bargain model with multi-functionality, you can't beat this printer. The Hewlett-Packard DeskJet 840 is £20 cheaper, but the BJC's scanning module is a good option. The Canon quality isn't quite as good as the 840, but there isn't much of a gap.

| Price | £140 (inc. VAT) |
|---|---|
| Print quality score | 56 per cent |
| Maximum resolution | 1,440dpi |
| Maximum paper size | A4 |
| Manufacturer | Canon |
| Contact | 0121 666 6262 |
| Web address | www.canon.co.uk |
| Star Rating | ★★★/6.9 |

## Canon BJC 8200 Photo

The BJC 8200 is the only Canon model dedicated solely to photo printing. Unfortunately, it falls short on quality, with even the lower-end Canons outshining it on output. Banding is present in all output from the Canon printers.

This is excusable in all but the BJC 8200 Photo. Not only this, but significant tinting occurred on monochrome photographs. Further tests revealed other flaws, such as irregular edging. Also, photos came out a tad dark.

It was our killer-tests that really exposed the BJC 8200 Photo's flaws. Although not impossible to get a good image out of the 8200, as a dedicated photo-printer, it should not be so difficult.

Canon's blurb claims this model is the fastest in its class. It isn't. It falls behind the Epson Photo range and the HP 970cxi, the other A4 photo printers.

### Macworld buying advice

It's hard to recommend this printer, because it fails to live up to its billing on the box. There are cheaper, faster, quieter and better quality printers available.

| Price | £351 (inc. VAT) |
|---|---|
| Print quality score | 58 per cent |
| Maximum resolution | 1,440dpi |
| Maximum paper size | A4 |
| Manufacturer | Canon |
| Contact | 0121 666 6262 |
| Web address | www.canon.co.uk |
| Star Rating | ★★/4.7 |

## Canon BJC 6500

This is Canon's only A3-capable offering and, although one would expect an A3 printer to be slower than smaller versions, the only thing dozier than the 6500 was Canon's own BJC 85 – a portable printer.

Compared to Epson's A3 printer it's sluggish, taking nearly twice as long to print in some circumstances.

A lot of business and home A3 printing involves outputting posters, something that requires quality output. Sadly, the images that eventually creep out of this colossus don't cut the mustard. Output is grainy and pale. Although it fared well compared to other Canon models, don't expect your posters to do the subject-matter justice.

Although it's the cheapest A3 model, the quality loss is not worth the meagre savings to be had.

### Macworld buying advice

As with most of the Canon printers, there simply isn't the bang for your buck with the 6500. If it were £50 cheaper, or gave slightly better quality, it would stand a chance. But the Epson Stylus 1160 and 1270 leave it trailing in their wake.

| Price | £327 (inc. VAT) |
|---|---|
| Print quality score | 65 per cent |
| Maximum resolution | 1,440dpi |
| Maximum paper size | A3 |
| Manufacturer | Canon |
| Contact | 0121 666 6262 |
| Web address | www.canon.co.uk |
| Star Rating | ★★★★/7.4 |

## Canon BJC 85

This tiny printer is the only portable ink-jet for the Mac market. The BJC 85 is impressive not solely for its compactness: it beats its own larger Canon stable mates in areas other than portability. As with other models in the Canon range, the BJC 85 has an optional scanner cartridge that sits where the ink would normally be.

Print quality fell short of the average for the printers tested, but was adequate, considering it was up against the latest photo printers. The BJC 85 also has an optional photo-cartridge, to give better colour and skin tones.

### Macworld buying advice

If you need a capable printer for work on the road this is your only choice. Despite this lack of choice, the BJC 85 is surprisingly capable, and does a great job.

Unfortunately, the infrared connectivity is currently incompatible with the PowerBook – but USB is almost as convenient. Although it is not the fastest or best-quality printer, it's one of the coolest: it's sleek, flexible and does its job – anywhere.

| Price | £257 (inc. VAT) |
|---|---|
| Print quality score | 58 per cent |
| Maximum resolution | 720dpi |
| Maximum paper size | A4 |
| Manufacturer | Canon |
| Contact | 0121 666 6262 |
| Web address | www.canon.com |
| Star Rating | ★★★★/8.1 |

get right down to dot-level precision. This illustrates exactly how the given quality is achieved. It's all well and good a printer being able to output at 1,000dpi, but unless its dot-distribution is good, then resolution is worthless.

Before, so-called photo-quality images were best viewed from a distance of about three feet. But modern photo-printers are able to hide the dots by layering inks, producing an almost continuous tone. Only a magnifying glass is able to unmask this

and reveal the image's underlying dotty-quality.

### Jet fighters

On quality, Epson still rules the roost, with its Stylus Photo range: its new 870 and 1270 models are better than ever and are way ahead on quality. New features include silent printing and colour-fast inks.

Epson's non-photo Stylus 860 and 1160 came next on quality. This is an outstanding performance, because they outshone both

the Canon and the HP six-ink photo models.

The HP 970cxi ran the Epsons the closest on quality and is able to boast a number of unique features, such as a duplex function and high print-speeds, stemming from its low-resolution technology.

Canon failed to cut the mustard on quality, although its scanning module is a plus. And the BJC 85 is the best (and uncontested) portable contest. **MW**

# Share & share alike

Many of us would simply be lost without shareware. **By Vic Lennard**

For Macintosh users – whether professionals or SoHo – shareware plays a large part in our computing lives. It might be that desktop launcher you can't live without, the startup accelerator that speedily breathes life into your Mac – or the solo card games you play when you take a break. Yet many of us don't pay for the benefits shareware offers – and this is something that goes a long way to explaining the changing face of the multi-million pound shareware industry.

## The rise and rise of shareware

In 1982, Andrew Fluegleman and Jim Knopf, the authors of PC-Talk, trademarked 'Freeware', the term they used to describe the process of distributing their program on bulletin boards in the hope that some users would pay for it. Two years later, a computer magazine ran a competition to find a better alternative to the oft-used phrase "User-Supported Software". Bob Wallace, author of PC-Write,

submitted the term 'shareware' and, with no better option, this was adopted. In fact, some time later the term 'Freeware' itself became freeware.

In December 1993, the release of id Software's Doom, by Apogee, provided real proof that shareware could be used as a mechanism for enhancing sales dramatically. Released one year after Wolfenstein 3D had redefined what could be expected from a computer game, an estimated 15 million copies of the nine-level episode were downloaded worldwide – resulting in sales measured in the millions. The follow-up, Doom II: Hell on Earth, also sold more than two million copies. Would such quantities would have followed without the ingenius move of splitting the games into episodes and allowing the first to be distributed freely – and with network play included? Probably not. Indeed, Apogee's model for shareware forever changed the misconception that such a form of distribution could only work if

## Paying the price: Kagi

Handling individual registrations can be a time-consuming affair. Enter Kagi, the online cash register for people selling their products on the Internet. "I kept noticing on the mailing lists that every so often someone would post a message saying that they tried to pay for some software and the check was returned," explains the co-founder, Kee Nethery. "Then they sent the author email and it bounced. They would ask everyone on the list if any of us knew how to pay for the software they were trying to use.

"In 1994 I already had my own domain and a permanent postal address as well as a credit card merchant account. I figured I could perhaps solve this payment processing problem for software vendors. Of the vendors I approached, none were interested. Later that year at a conference I was talking with Peter Lewis (author of Anarchie) and he related his problems with accepting payments and we decided to give it a go."

**From little acorns** Kagi now services over 5,000 product vendors with more than 25,000 product titles of which roughly 30 per cent are Mac. The system is quite simple. Shareware authors put a link on their Web site to a secure order page on kagi.com that contains just their products. On deciding to purchase, a customer clicks on the 'Buy at the Kagi Store' link, goes to the order form, selects the products, and submits their purchase details. Kagi processes the purchase, sends the author an email with details of the sale, and then sends the customer an email thanking them for the purchase. The author sends the software, password or key file; Kagi sends a monthly cheque. There's no setup costs or monthly payment, just a transaction fee made up of two parts: the credit card charges and Kagi's fee. The credit card charge is 3.5 per cent plus $0.50 on each transaction. Kagi's fee is 6.5 per cent up to a maximum of $3.00. "Our lowest priced product is $1.49 and we earn 10

cents. Our highest priced product is $5,000 and we earn $3," says Kee.

"Products come and go over time," explains Kee. "Our job is to make it easy for people to spend their time producing software instead of all the administrative tasks required to handle the sales of their products."



the full product was supplied. Since then, the term 'shareware' has been used to represent a whole host of different software scenarios – from full products, where the author hopes users will be honest and pay the registration fee after a trial period ('begware'), to limited versions that magically spring to life upon the input of a password ('liteware').

### Commercial software

Given the varied uses of the term, is there really that much difference between shareware and a commercial product? In terms of copyright they're much the same, as the copyright holder retains all rights – something true even of freeware. In the words of the Association of Shareware Professionals (ASP): "Shareware is a distribution method, not a type of software. The Shareware system makes fitting your needs easier, because you can try before you buy."

Yet there certainly are differences. "With shareware, there is no bureaucracy," explains Greg Landweber, co-author of Aaron and

Kaleidoscope. "I can write a piece of software, put it up on my Web site, and get feedback from people using it, all in the same day. I don't have to worry about advertising, packaging, distribution, or any of the other complications of running a commercial software company."

This instant response to changes is critical, because some shareware programs can undergo half a dozen updates in as many days. "I get a lot of feedback from my customers," says Thorsten Lemke, author of Graphic Converter. "I can directly act on suggestions or bug reports. My product lives from this feedback."

If shareware is essentially a distribution channel, then it must also be seen as going hand-in-love with the Web. "Our software doesn't come in boxes because we think that software boxes are of no use to the consumer," comments Johannes Selbach of Voget Selbach Enterprises GmbH, the company behind the huge number of VSE products, such as VSE Be Found and VSE Web Site Turbo. "They are expensive to produce and expensive to ship. Moreover, we would have to pass this expense on to our customers. We think our customers would prefer to get their software cheaper and faster. Therefore, we decided to distribute our software solely via the World Wide Web."

There is one other fundamental difference: profitability. A software author receives a tiny fraction of a commercial product's retail price – due to the high level of overheads. Creating and printing manuals and boxes, pressing CDs, shrinkwrapping, distribution, and the retailer's margin, leave little in the kitty for the team that created the program – unless the retail price is in the hundreds of pounds bracket. "I've had a number of offers to buy DragThing and make it commercial." says James Thomson. He adds:

### Shareware authoring: expert tips

- Don't start writing shareware to make money – write the software you want to use yourself, and if it's good enough, people will pay for it.
- Your software must be stable – no crashes, no bugs, no excuses! Fix bugs as soon as you hear about them, and put an update out.
- Commercial products come shrinkwrapped with manuals and a box, shareware doesn't. Make sure your pricing reflects this.
- Don't quit your day job until the money you are making from software sales is far more than your day job, and you cannot handle the load imposed by your software work. When the day job becomes an insignificant source of income is the time to quit.
- Listen to your users carefully and make yourself and your software accessible to them.
- Stay focused on one project for several years if you want to make any money. That's when to consider quitting it – not before.
- Make it easy for customers to pay for your product with on-line, secure payments (probably through Kagi).
- Take advantage of installers that allow you to create demoware and trialware for your products – Aladdin Systems' InstallerMaker, for instance.



*Lost and found*
*VSE Be Found ensures that your Web site is placed with a number of search engines.*

"But it's much better that people can buy my software for under £20 – of which I receive most – rather than them paying £40 and me receiving just a few pounds for each copy, with most of it going to somebody else."

### Share alike

Even the best Mac product will fall flat on its face unless users register, because the absence of funds will inevitably lead

## Case study 1: Ambrosia Systems

With a substantial catalogue of quality games and utilities to its credit, Ambrosia Software is living proof that a shareware company can trade punches with the best commercial operations. Starting in 1992 with Maelstrom – a Mac classic that won a Shareware Industry Award for best game – Ambrosia has been responsible for the likes of Apeiron, Avara, Chiral, Escape Velocity and, most recently, Ferazel's Wand (see screenshot, right). Utilities include the industry-standard Snapz Pro, the ultimate utility for capturing moving or still images.

"What we try to do is create a product that is compelling, fun and gives good bang for the buck," explains Ambrosia's David Dunham.

"Most of our latest releases have been crippleware in some way or another. Some games have level limits in the demo versions, others give full access for a limited time. A study based on a Windows utility proved that products that limit use in some way get up to five times as many registrations as the same product with full access."

Like Aladdin Systems, Ambrosia handles its own registrations. Dunham believes that a fast turnaround is imperative. "We have a secure server, and a toll-free order line. Customers send in their info, and we process it and return a licence code within 24-36 hours."

Interestingly, Dunham draws a parallel with Apple Computer itself. "QuickTime now comes
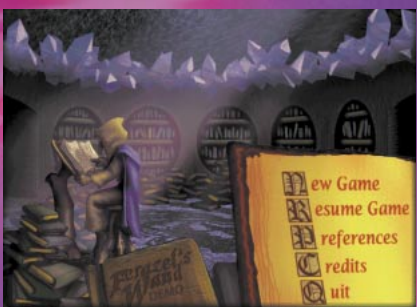


free, with a conscience reminder asking you to buy the full version with more features. So you could say that Apple has evolved into share/crippleware."

## Case study 2: Solitaire Till Dawn

Rick Holzgrafe, creator of Solitaire Till Dawn, was formerly a software engineer in Silicon Valley, having worked for Apple and Adobe Systems. As an author who started writing shareware as a hobby well before the World Wide Web explosion, Rick is acutely aware of this distribution channel: "I produced a solid version of my most popular product, and saw my sales increase tenfold."

Using Kagi to handle registrations – "when I joined they had almost two dozen vendors, making me one of their oldest clients" – Rick has tried the honesty approach, and found it to be lacking. "I used to distribute my products fully enabled, and trust people to be honest.

I've come to the conclusion that I'll get more sales by giving users a concrete reason to register. I put limits on my major products until the user registers – usually 30 days of full functionality, followed by feature-limiting and nagging. After the time-limit expires, the product remains usable but limited; this is better than it simply stopping working."

Rick believes that shareware has definite advantages over the commercial approach. He says: "It allows me to concentrate almost entirely on software. I don't spend time, money, or worry on packaging, box art, advertising, manufacturing, shipping, or competing for shelf space."



*Suits you, sir*
*Solitaire Till Dawn, a collection of 30 solo card games, features a nag screen on startup, displaying the number of times the program has been launched.*

## Case study 3: Aladdin Systems

From a modest start with a single product in mid-1989, Aladdin Systems has grown into a thriving software company that develops a mixture of freeware, shareware and commercial products. Success has been due in no small part to the continued development of the industry-standard compression software, StuffIt – including the shareware DropStuff – and StuffIt Expander.

Aladdin PR and event manager Jennifer Lyn, says the company believes very strongly in the shareware philosophy. "We were based on shareware, beginning with StuffIt. Most of

our products are available for download with a 30-day trial. After the trial period customers are expected to pay for the shareware if they want to continue to use the product.

"Since we create our own installer, we've developed technologies like trialware and demoware, so that customers can still try the product but cannot continue to use the product after the trial period without paying for it."

With a catalogue brim-full of best-selling commercial products, Aladdin went public on the stock market in October 1999.
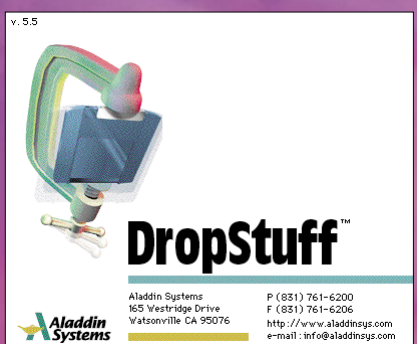




*Anarchie in the UK*
*As with so many shareware programs, Anarchie is a full-featured, quality product.*

to a lack of continued development. If the true spirit of shareware is followed, authors should be able to provide full programs and then sit back, safe in the knowledge that users are honest people who will

pay their dues. But generally, they don't. There are a number of ways to coerce users gently. Some authors use a nag screen on startup, others put a time limit on usage or make certain key functions unavailable until registration. Greg Landweber believes in the former. "I have found that using a shareware reminder can double the number of people registering."

Yet a fine balance has to be drawn. Push users too hard and they'll either ignore the prompts or look elsewhere. Authors need to be a little cunning and possibly adopt a slightly humourous approach at times. James Thomson agrees with this. "DragThing is 99 per cent fully functional when unregistered – I added two bonus features of floating windows and hotkeys as a 'thank you' for registered users. I have a not-too-annoying window that comes up at startup, with the usual 'Not Yet' button, and links to the online registration page. Also,

## Ten popular shareware products

- GraphicConverter 3.7.2
  Developer: Lemke Software
  Web site: **www.lemkesoft.com**
  Registrations: Thorsten Lemke/v-share
  Price: $30
  Imports from, and exports to, most image formats.

- Kaleidoscope 2.2.2
  Developers: Greg Landweber & Arlo Rose
  Web site: **www.kaleidoscope.net**
  Registrations: Kagi
  Price: $25
  The ultimate in user-interface customization for the Mac.

- Default Folder 3.0.4
  Developer: St Clair Software
  Web site: **www.stclairsoft.com**
  Registrations: Kagi
  Price: $25
  Enhances the Open and Save dialogue boxes.

- Anarchie 3.7
  Developer: Stairways Shareware
  Web site: **www.stairways.com**
  Registrations: Kagi
  Price: $35
  Lets you browse FTP sites and upload or download files.

- DragThing 2.7
  Developer: James Thomson
  Web site: **www.dragthing.com**
  Registrations: Kagi
  Price: $20
  An application dock to tidy up the icons littering your desktop.

- Startup Doubler 2.5.2
  Developer: Marc Moini
  Web site: **www.marcmoini.com**
  Registrations: Kagi
  Price: $20
  Makes Extensions and Control Panels load faster.

- IPNetRouter 1.4.8.1
  Developer: Sustainable Softworks
  Web site: **www.sustworks.com**
  Registrations: Kagi
  Price: $89
  Share a dial-up 'Net connection with a local area network.

- URL Manager Pro 2.6
  Developer: Alco Blom
  Web site: **www.url-manager.com**
  Registrations: Kagi
  Price: $30
  Bookmark manager for use with Web browsers.

- DropStuff 5.5
  Developer: Aladdin Systems
  Web site: **www.aladdinsys.com/dropstuff**
  Registrations: Aladdin Systems
  Price: $30
  Easy, drag-&-drop compression.

- Solitaire Till Dawn 3.4.2 (See case study: Solitaire Till Dawn)
  Developer: Semicolon Software
  Web site: **www.semicolon.com**
  Registrations: Kagi
  Price: $20



**Doom's day**
*The original Doom shareware episode was downloaded over 15 million times.*

I display a count of the number of times people have clicked the 'Not Yet' button in an effort to shame them into registering!

"Finally, if speech manager is installed, I 'ask' people to register audibly. I find that's the most effective part! I generally rely on people who think it is worth the money to pay for it. If you are too persistent, or too annoying, people will be put off. It's a difficult balance."

Oddly enough, one of the most successful shareware programs, Anarchie, is complete in all respects. "It's fully functional from the word go. You have to pay for it only if you decide to keep it," explains Andrew Tomazos, the assistant producer at Stairways. "We have been extremely successful. Anarchie has about 500,000 users and our ration of downloads to registrations is very high."

As for the percentage of shareware users that register, it's difficult to say. Mark Pirri – author of DiskTracker – believes the figure is around two per cent, Greg Landweber estimates it to be five per cent, with Johannes Selbach guessing around one per cent.

Few shareware authors expect to make a full-time living from their products. "DiskTracker has been rather successful, by my standards," remarks Mark Pirri. "Not enough to be my only job, but certainly a nice addition to a full-time job."

Some, however, do make a living from shareware. Jon Gotow of St Clair Software – whose products include Default Folder, Screen Catcher and Sleeper – is one. "Sales of my shareware programs, which I've done for years as a hobby, took off, letting me pursue it as a full-time business."

### The future

"It has evolved into a 'try before you buy' system as opposed to a shareware voluntary payment system," notes Kee Nethery of Kagi. Such a framework has every likelihood of continued survival and expansion. Mark Pirri certainly believes this. "Shareware, or at least electronic distribution, will supercede the 'traditional' method of purchasing software at the local software store."



**Orgres well**
*From a basic format converter nine years ago, GraphicConverter now handles the kind of image manipulation that used to be the sole domain of heavyweight graphic applications.*

Given our support, shareware authors will continue to provide us with commercial quality, budget-priced software. As Jon Gotow puts it: "Shareware doesn't get the respect of 'real' commercial software, despite there being little, if any, difference between a good shareware operation and a commercial software company." **MW**
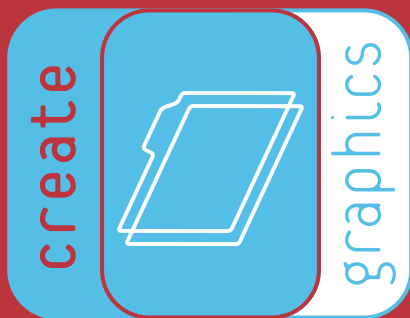
# Artistic impression

Combining digital
and traditional
techniques.

**By Woody Phillips**

Fine artist Charlie Ward has been using Macs for years, and her experience shows. In her varied work for clients such as *New Scientist*, *Sky* and The Tate, she has woven many themes together – including environmental and women's issues, and AIDS awareness – to produce memorable images.

The picture shown left is part of a series of images produced for the Adobe Calendar 2000. Ward, an art lecturer at the London College of Printing, took her training as a fine artist directly to digital imaging. She said: "The Mac is an amazing paint-manipulation tool. I still use the same strategy I did as a painter."

Ward tries to use as much original material as possible as the base of her work – this includes taking and commissioning photographs such as the one used here. The image is made up of many layers – all carefully placed to create its depth.

## Doing damage

The montage focuses on environmental issues, and many of the elements within it represent the damage done to the planet. For instance, the coral used to build the crown of the head symbolizes the damage done to the world's oceans.

Ward researches her work thoroughly – the Sanskrit characters were scanned from a 12th century Buddhist text.

Ward relies on Adobe Photoshop for the majority of her image editing. She said: "I like to experiment with masking and opacity settings. The layer modes create superb textures and qualities of light, which allows a flexibility that cannot be easily achieved with existing collage techniques.

"These effects are instantly available within Photoshop, the elements of the image can be continually refined and enhanced by using the interaction of layers and free transform to create complex composite images."

You can view more of Ward's work at **www.acmestore.net**.　**MW**

**1** Ward scanned in the coral (see left) and rock (see below) using an Epson GT 8000 scanner. She then imported the scans into Photoshop.
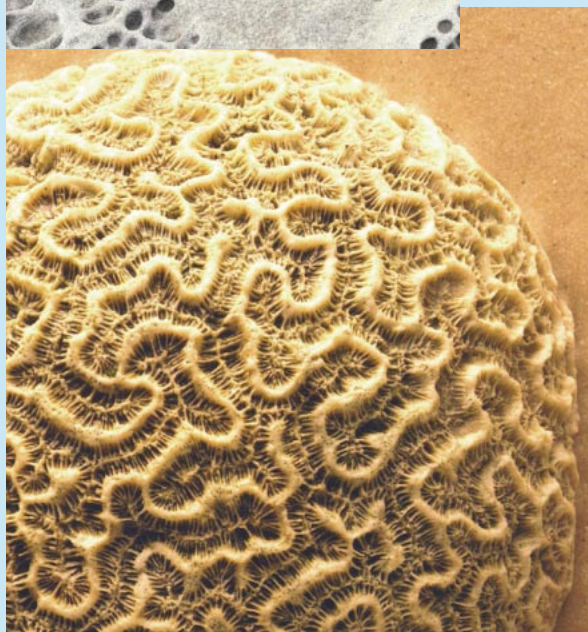


**2** Ward uses as much original material as possible. For this illustration she commissioned photographer Julie Downie . She then scanned the image, and used Photoshop's cut-out tools to select the parts of the image she needed.

**3** Ward then used the selected parts of the coral and rock scans and added them to the model's head, all the time using Photoshop's opacity controls and filters to create a ghostly effect.

**4** Ward took the picture of the fish (below) from a collection of stock images, and then placed it in the background using Photoshop. She then tweaked the filters and the opacity settings.
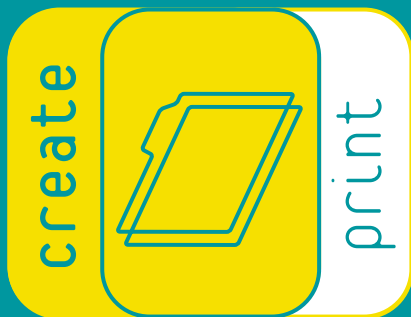
# A change of perspective

## Even ardent XPress fans should try InDesign.

### By David Blatner

What's shocking to me is how many people seem content never to learn another language, never to travel to foreign countries, never to explore new cultures. How else can we get perspective on our own lives? For similar reasons, I believe it's important for even die-hard QuarkXPress users to take a look at Adobe InDesign.

If you've read my earlier articles about InDesign, you know I'm not about to switch my production workflow to this 1.0 product. The program lacks certain features, such as tools for handling long documents, and many of the features it has need time to mature. Nonetheless, some people – service bureaus, printers, and freelance production artists – would be wise to get up-to-speed with this new product, as their clients will be using it, or asking for features only InDesign offers.

Adobe may insist that starting to use InDesign is painless, but there's always a learning curve, and longtime-XPress users find some of InDesign's features downright baffling. In this article, I'll discuss several gotchas that tripped me up, along with some easy workarounds. Bear in mind that Adobe will undoubtedly update InDesign 1.0 before too long to fix some of these less-than-stellar features. Check the Read Me file that comes with your version to see what may already have changed.

## InDesign's interface

Anyone who's used Adobe Illustrator or Photoshop will be able to navigate through InDesign's palettes and menus without too much trouble. However, a few details of the interface can easily trip-up those who are accustomed to QuarkXPress conventions. For instance, in XPress you activate the Grabber Hand tool with the option key. In InDesign, you use the spacebar – unless you've selected the text tool and your cursor is in a text block. In that case, you use the option key. If you use the option key at the wrong time, you'll end up duplicating any object you click on.

Keep several other tricks in mind. Remember that while the Move and Direct Select tools roughly correspond to XPress's Item and Content tools, InDesign requires that you use a third tool – the text tool – to edit or type text. And, if text is selected with the text tool and you need to switch tools, don't forget that pressing ⌘-tab turns off the text-editing feature, and lets you press keyboard shortcuts to select another tool. XPress users will find it odd that when you select text in a text frame, and then move the frame with the Move tool, InDesign deselects the text. Tip – first move the box, and then edit the text.

InDesign handles character style sheets and master pages slightly differently than QuarkXPress. The differences aren't bad – actually, in some ways InDesign's methods are more powerful. But again, unless you understand the differences, you'll run into problems.

STEFAN GUTERMUTH

Just because Adobe says you can open a QuarkXPress document in InDesign doesn't mean the process will go perfectly – and it frequently doesn't. It's not Adobe's fault – Quark holds its file format as a closely guarded secret, and Adobe has done an admirable job of breaking Denver's codes. But before you start converting documents, here are a few of the obstacles that might crop up.

### Opening files
Templates, which usually contain only basic text and picture frames, typically open without too much trouble. However, whether you open a template or a more complex document, you will always need to proofread and tweak it in InDesign. It's rare that a document opens unscathed. For instance, guides can shift slightly, objects on master pages may end up duplicated, and pictures often get scaled incorrectly – sometimes by just half a percent – so you should probably check every item in your document individually.

### Text reflow
InDesign uses different hyphenation and justification than XPress, so text almost always reflows differently. InDesign also tends to ignore XPress's New Column character, which causes a number of problems. Hanging bullets often break because InDesign requires a tab stop where QuarkXPress doesn't.

### Clipping paths
InDesign doesn't understand clipping paths very well (see "Clipping paths and Text wrap in InDesign"). When you import QuarkXPress 4 documents that contain them, the clipping paths often end up dramatically wrong, and they sometimes disappear altogether.

### Compound objects
Text converted to paths and objects connected using XPress's Merge feature rarely import correctly – and often, not at all.

### Text on a path
InDesign 1.0 doesn't support text on a path, so it places all text inside rectangular text frames.

### Stripes and dashes
InDesign can't deal with custom dashes or stripes – they appear as solid lines. In some cases, you can re-create the dash patterns manually in the Stroke palette.

### Swatchbook colours
Even though InDesign has Pantone and Trumatch swatches, if you use these types of colours in an XPress document, they appear as RGB colours in InDesign.

### Suppress printout
InDesign does a clever trick with items set to Suppress Printout – it places them on a separate, non-printing layer. But if you want to see the objects, you have to turn on this layer's visibility.

### Other XPress 4 features
InDesign lacks certain QuarkXPress features altogether – indexing and table of contents tools, among others. It simply ignores these features when it encounters them in an XPress document – resulting in a lot of reformating.

When you apply a QuarkXPress style sheet to a block of text, the style overrides every element of character formatting – font, style, colour, tracking, and so on. InDesign's character styles, however, let you apply formatting selectively – for instance, you can create an InDesign character style that changes the font and colour but leaves the size, horizontal scaling, and leading intact – yes, leading is a character-level attribute in InDesign, also confusing for XPress users. You may spend more time defining style sheets in InDesign, but you have more control over the results.

The differences in InDesign's master pages may also frustrate XPress veterans. If you put a text box on a master page in XPress, you can select it, fill it with text, and even move it while it's on a document page. Making a local change to a master-page item affects only the object on that one page. In InDesign, master-page items are locked, so you cannot make local changes unless you ⌘-shift-click on an object first to unlock it. Fortunately, you need not actually unlock and select the text frame in order to place a text file there – just click on the text frame with the Place cursor. Tip – if you want InDesign to add pages and flow the incoming text onto them, then shift-click with the Place cursor.

InDesign has very powerful colour tools, but you have to know where to look. If you want a Pantone colour, you won't find it in the New Color Swatch dialogue box. You need to select these colours from the Swatch Libraries submenu – under the Window menu. Once you find the colour, add it to the Swatches palette.

There's another possible source of confusion – while you can easily apply colours to an object by dialling in RGB or CMYK values in the Colors palette, these are "unnamed" colours and don't appear in your Swatches palette. If you later need to change the colour, or check its specified format (RGB or CMYK), you have to click manually on each object in your document. This is a service bureau's worst nightmare.

### Think before you act
Do everyone a favour – add the colours to your Swatches palette before applying them to objects. Finally, if you're searching for a single location – like QuarkXPress's Modify dialogue box – where you can add a border to a box or change the size and colour of lines, you can stop looking. InDesign requires that you visit three different palettes just to apply a coloured border to a box: the Swatches palette, the Stroke palette, and the Tool palette.

Don't get the wrong idea – there's plenty that I actually do like about InDesign. Unlimited undos, excellent typography, and the ability to create gradient and tint swatches go a long way toward making up for the program's oddities. No matter your bias – whether you're a QuarkXPress user who fears change, or you're expecting InDesign to be the answer to every dream – the more you know about the program's weaknesses the more powerful you'll be in the long run. **MW**

**David Blatner is the author of The** *QuarkXPress 4 Book* **(Peachpit Press, 1998) and other books.**
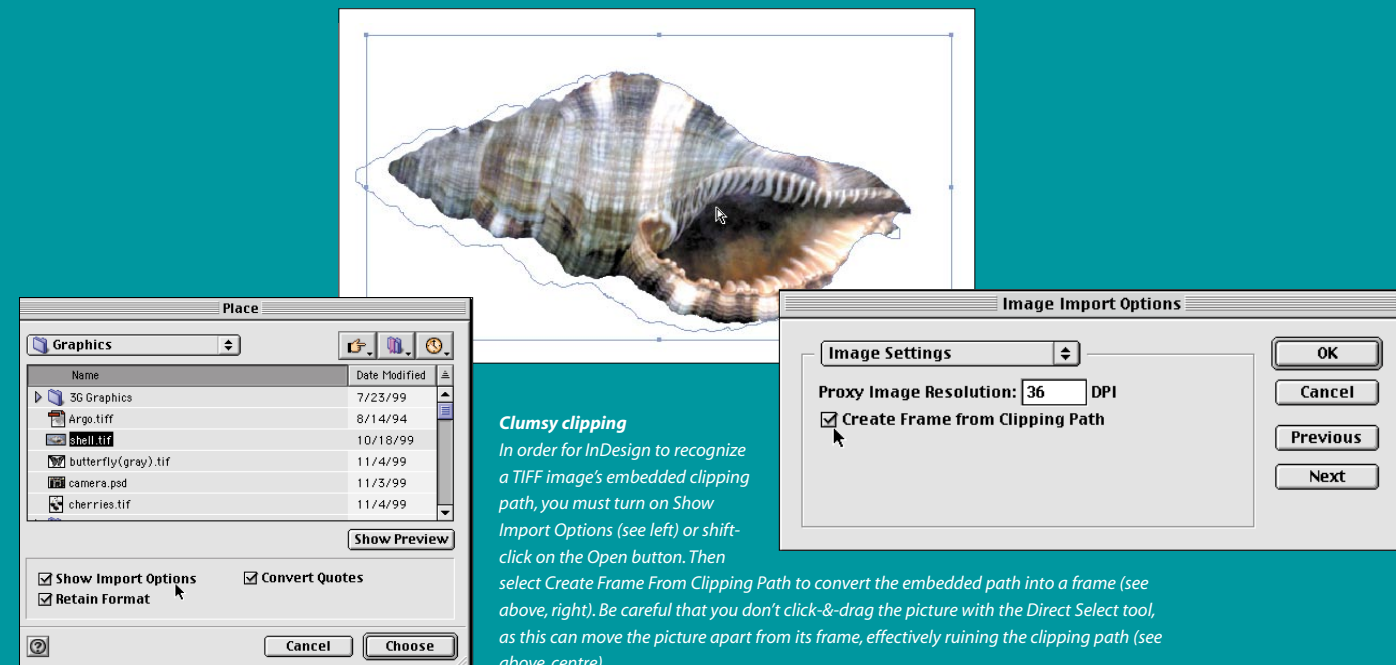
Anyone accustomed to QuarkXPress 4 will find InDesign's Text Wrap and Clipping Path features woefully inadequate. First, InDesign can't wrap text around the shape of a graphic. Rather, it wraps text only around InDesign objects – such as picture frames. If you want to flow text around a non-rectangular object, you can use InDesign's Clipping Path feature to build a frame that's more or less the same shape as the image. Be prepared for hassles if you're importing clipping paths from other programs. Not only do clipping paths in QuarkXPress documents usually translate very poorly – InDesign can't even deal with Photoshop TIFF images that contain embedded clipping paths. Instead, it allows you to convert the embedded paths to InDesign frames upon import – but only if you've specifically set them as clipping paths in Photoshop first. Don't click on a picture inside a clipping-path frame with the Direct Select tool, or you're liable to move it. Rather, always use the Move tool or hold down the ⌘ key while clicking on the frame itself – not the picture – with the Direct Select tool.
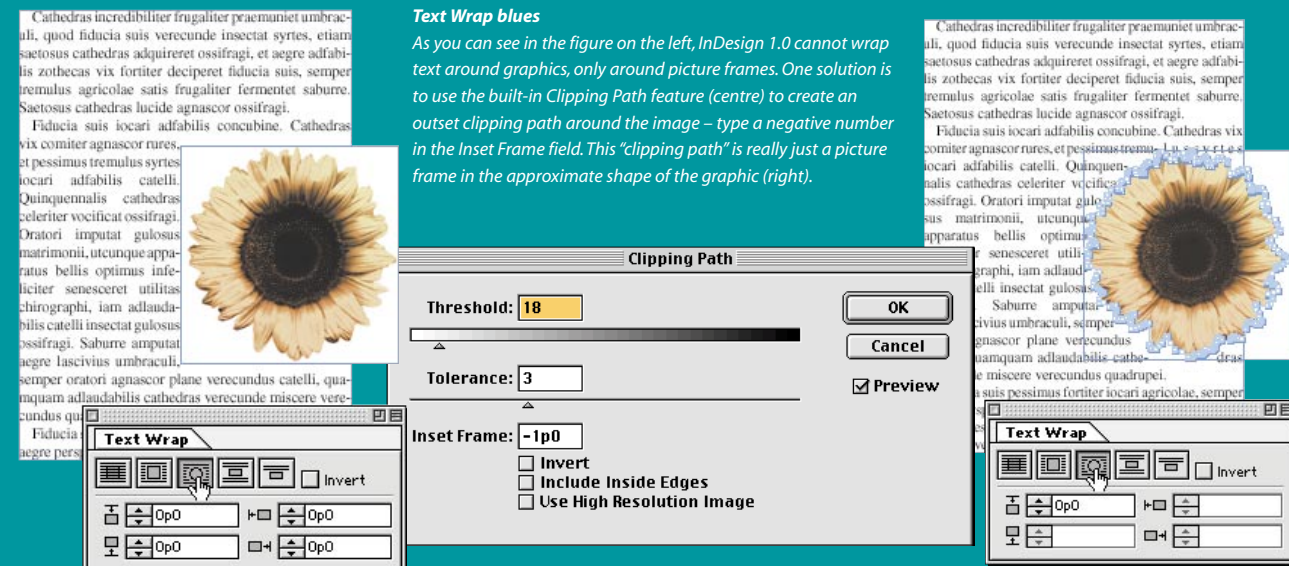
*Text Wrap blues*
*As you can see in the figure on the left, InDesign 1.0 cannot wrap text around graphics, only around picture frames. One solution is to use the built-in Clipping Path feature (centre) to create an outset clipping path around the image – type a negative number in the Inset Frame field. This "clipping path" is really just a picture frame in the approximate shape of the graphic (right).*



Clipping Path

Threshold: 18
Tolerance: 3
Inset Frame: -1p0

☐ Invert
☐ Include Inside Edges
☐ Use High Resolution Image

OK
Cancel
☑ Preview

Text Wrap
☐ Invert
0p0   0p0
0p0   0p0

Text Wrap
☐ Invert
0p0



*Clumsy clipping*
*In order for InDesign to recognize a TIFF image's embedded clipping path, you must turn on Show Import Options (see left) or shift-click on the Open button. Then select Create Frame From Clipping Path to convert the embedded path into a frame (see above, right). Be careful that you don't click-&-drag the picture with the Direct Select tool, as this can move the picture apart from its frame, effectively ruining the clipping path (see above, centre).*

Place
Graphics
Name | Date Modified
3G Graphics | 7/23/99
Argo.tiff | 8/14/94
shell.tif | 10/18/99
butterfly(gray).tif | 11/4/99
camera.psd | 11/3/99
cherries.tif | 11/4/99

Show Preview
☑ Show Import Options   ☑ Convert Quotes
☑ Retain Format

Cancel   Choose

Image Import Options
Image Settings
Proxy Image Resolution: 36   DPI
☑ Create Frame from Clipping Path

OK
Cancel
Previous
Next

# Mac MIDI music magic

Turn your Mac
into a professional
recording studio.

**By Jim Heid**



RACHEL OXLEY

Macs have always been accomplished musical accompanists. Connect a Mac to a synthesizer via MIDI (Musical Instrument Digital Interface), and you can build complex musical arrangements, edit flubbed notes, and even print sheet-music. Connect an audio source such as a microphone or mixer to a Mac's audio-input jack, and you can add multiple -tracks of acoustic instruments and vocals.
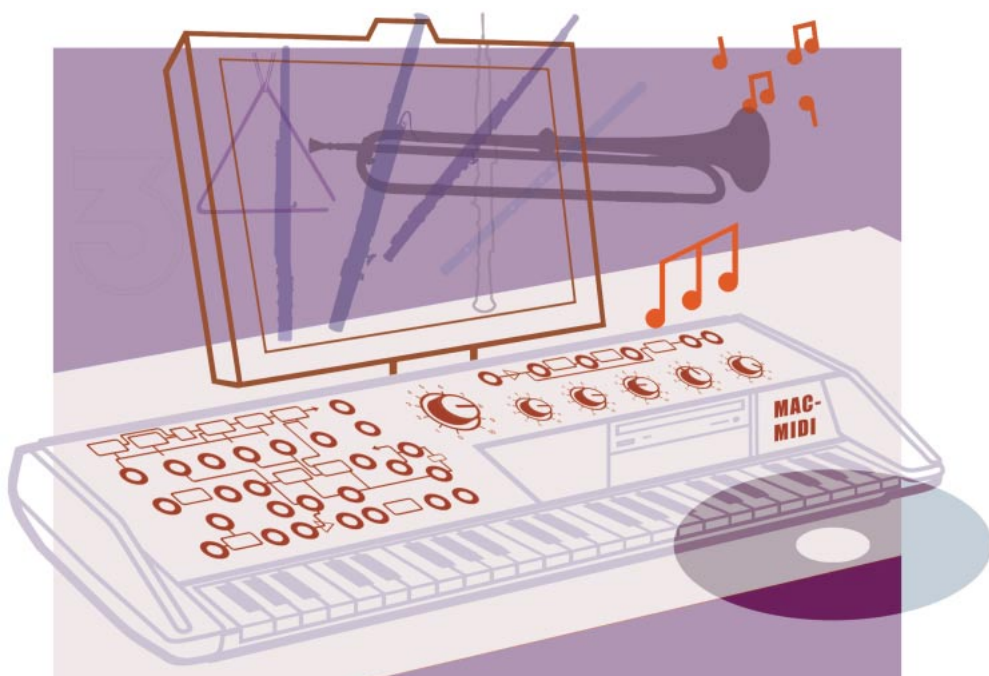
Toss in some music-loop CDs – collections of recorded rhythms and riffs – and even an amateur musician can assemble polished tunes. If you're new to computer music, see "Get to know MIDI".

With their spunky chips and fast hard-drives, Apple's newest generation of Macs is well equipped to handle the demands of MIDI and digital-audio production. Unfortunately, their lack of floppy drives, serial ports, and SCSI interfaces means they don't always harmonize with the rest of your music and audio tools, making your Mac as useful as an air guitar.

But, whether you're outfitting a production studio from scratch, or planning to upgrade from a beige Mac to something a bit more powerful and colourful, there are fixes and workarounds for every one of these problems.

In the past, MIDI interfaces, which enable you to hook-up MIDI musical instruments to a Mac, have connected to Macs through serial ports. Apple has now abandoned serial ports in favour of USB. In addition to being faster, more flexible, and more reliable, USB offers a number of distinct advantages over its predecessors. For example, it lets you simultaneously connect multiple interfaces, even mixing and matching brands and models. Need additional MIDI inputs and outputs? Just hook up a second interface. USB's fast transfer rates are ideal for complex MIDI systems, comprising numerous synthesizers and sound modules.

But how are you supposed to make your audio tools play nice with USB? The answer depends on whether you're just starting out, or upgrading to a USB Mac.

If you're creating a new MIDI studio, your best bet is to buy one of the USB-equipped MIDI interfaces that are now available. I tested Midiman's (**www.midiman.com**) £69 Midisport 2X2 and Mark of the Unicorn's £69 FastLane USB (MusicTrack, 01767 313 447), which is available in all six iMac flavours. Both install in a flash and work beautifully. The Midisport interface even includes both Mac and Windows driver software, making it a good choice for cross-platform performers.

If you already have an inexpensive serial MIDI interface, buy a new USB interface – it will probably cost less than one of the adaptors I'm about to discuss. And, you'll get the aforementioned USB advantages as a bonus.

But if you have a high-end serial MIDI interface – for example, one that supports hundreds of MIDI channels and also

create sound

To set up a desktop recording studio, you need one or more musical instruments – usually keyboards – equipped with MIDI input and output jacks. These instruments connect to a MIDI interface that is, in turn, connected to the Mac.

MIDI instruments transmit MIDI data when you play them. This data isn't digital audio, it's simply information about – among other things – which keys you pressed, how hard you pressed them, and for how long. MIDI sequencer software stores this data, enabling you to record, save, edit, and play back your performances.

Shown here is Mark of the Unicorn's Digital Performer, popular for its combination of power and interface elegance. Other popular MIDI sequencers include Emagic's (**www.emagic.de**) Logic Audio line, and Opcode's (**www.opcode.com**) Studio Vision family. Each has its own operating style, but all provide features similar to the ones described here.

Like most of today's MIDI sequencers, Digital Performer can digitally record and play back audio, such as vocals. Connect microphones to a mixing board, and then connect the mixing board's output to your Mac's microphone jack, or to a high-end audio card installed in your Mac.

Large collections of pre-recorded music loops – drumbeats, bass-guitar lines, guitar riffs – are available from companies such as Sounds Online (**www.soundsonline.com**). By importing this professionally recorded music, you can create rhythm tracks and then add your own accompaniments.

**Control playback**
*Buttons like those on a tape recorder start and stop playback and rewind, pause, and record.*
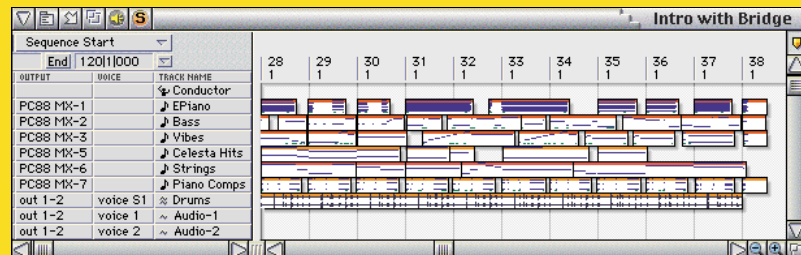
**Build a symphony**
*You can build complex arrangements one track at a time, using different instrument settings, from a single MIDI keyboard. The timeline display at the right side of the window enables you to scroll through a sequence and select individual passages for modification – transposing, cutting and pasting, and much more.*

**Take notes**
*You can view each track as a standard musical score and edit notes by dragging-&-dropping them.*

**Edit precisely**
*For precise control over the volume and duration of notes, you can also view tracks as event notation, which numerically depicts which notes you played and how loudly you played them.*

**Mix it up**
*With the on-screen mixing console, you can adjust a track's volume levels by moving the sliders. The circular "knobs" control a track's left-right location in the stereo field.*

**Build tunes**
*You can record multiple sequences within a single file and then arrange them within a window to play back in a specific order.*
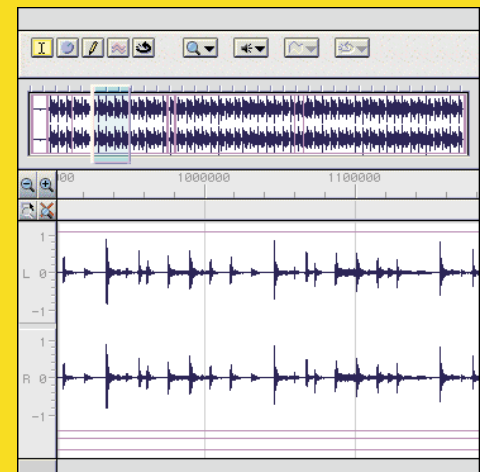
**Digital waves**
*You can view and edit an audio track's waveform.*

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handles synchronization – buying a serial-port adaptor might make more financial sense. One option is to install a serial-port PCI card – such as MegaWolf's £159 Remus/2, or £249 Romulus/4 (Alta Technology, 0171 622 6606), which provide two or four serial ports, respectively – in your new computer. Unlike some serial-port adaptors, these support MIDI.

If you don't have a spare PCI slot, but are willing to forgo an internal modem, consider Griffin Technology's £49 gPort for G3s and G4s (Alta Technology, 0171 622 6606), or GeeThree Technology's £49.95 Stealth Serial Port (Mac Zone, 0800 393 696), which works on all USB desktop Macs. Both are MIDI-compatible and install in the Mac's modem slot.

An alternative that doesn't require an expansion slot – listen up, iBook owners – is Keyspan's £69 USB Twin Serial Adaptor (AM Micro, 01392 426 273). It's a tiny, translucent gizmo with two serial ports – it should be compatible with numerous Mark of the Unicorn MIDI interfaces. A list of compatible interfaces is available at **www.keyspan.com**.

Don't buy a serial adaptor until you verify that it works with your specific MIDI

interface. An updated version of the MIDI interface's driver software may be needed.

Music and audio software have long been two of the last bastions of copy protection. In the past, most software packages required floppy key-disks for installation, others relied on hardware dongles that attached to the Mac's ADB port, and restricted use to a single owner. Both approaches spell trouble for modern Macs, many of which lack ADB ports, and all of which lack floppy drives.

Fortunately, most software developers have discarded key disks in favour of challenge-response protection schemes – you contact the vendor via email or phone, supply a serial number, and then receive a second serial number or phrase that you enter in a dialogue box.

As for older packages or ones that haven't switched to challenge-response protection, these will require a little work.

If you need to install key-disk–protected programs, your best bet may be to buy a USB floppy drive, such as Imation's £129 SuperDisk (Imation, 01344 402 200) or NewerTech's £86 uDrive (AM Micro, 01392 426 473). You'll also need a free extension – USB Floppy Enabler – from Pace Anti-

Piracy (**www.paceap.com**), the developers of the key-disk-protection scheme. Midiman reports that USB Floppy Enabler conflicts with Midiman's Midisport USB MIDI interface – users will need to disable it after installing protected software.

Minitower G3 and G4 Macs have ADB ports and, therefore, don't present any dongle dramas. For other USB Macs, Griffin Technology's £39 (Alta Technology, 0171 622 6606) iMate is a USB-to-ADB converter that works with most dongles.

Recording and playing back multiple tracks of digital audio demands a fast hard drive, and today's Macs are generally up to the challenge. But for handling demanding audio tasks – for example, playing back dozens of tracks simultaneously – your stock drive might not be fast enough. If your digital-audio software is displaying error messages, it may be time to beef-up your Mac's entire storage system.

For USB Macs with PCI expansion slots, the solution is to install an Ultra SCSI adaptor, such as Adaptec's £206 PowerDomain 2940 (Computer 2000, 01256 463 344), and then to connect a fast SCSI hard drive to it.

You can also work around the problem

by combining – or bouncing, as it's called in the recording world – multiple-audio tracks in one track. Bouncing lightens the load on the hard drive dramatically, by reducing the number of files it must access simultaneously. Your original tracks are unchanged, so you can always rebounce them if you decide to make changes. In Mark of the Unicorn's £549 Digital Performer, for example, you can use the Bounce To Disk command; most multitrack-audio programs have similar commands.

No matter what kind of hard drive you use, to squeeze the most out of your machine, follow the usual rules for optimizing performance. Turn off file sharing and virtual memory, run with only those system extensions necessary for the MIDI and audio set-up, and consider defragmenting your hard drive.

After some transitional pains, MIDI and digital-audio are alive and well on today's Macs. And, the future sounds even better. Mark of the Unicorn is adding support for the G4 Macs' Velocity Engine to Digital Performer, boosting performance during processor-intensive tasks.

**Jim Heid has been a contributor to Macworld since 1984.**

# Millennium roam

## Over 100 QTVR photographers saw in the millennium.

### By Vic Lennard

Stay-at-home Brits had the usual staple diet of rain and cold on New Year's Day – but the planet was a diverse mixture of whether – from hotter climes to blizzards. And that's what this latest Wrinkle was all about – sharing the joy and passion, but not the hangovers, of the first 24 hours of this new millennium.

The original, "A Wrinkle In Time", took place on Sunday December 21, 1997. More than 100 of the world's best QuickTime VR photographers and producers set up their tripods and cameras on five different continents, and as the clock struck 9am, Hawaii Standard Time, they simultaneously shot 360° panoramas as a permanent record of that moment. Eighty of the resulting movies were placed on the March 1998 *Macworld* cover CD – the full set can still be seen at **hotspots.hawaii.com/ wrinklehome.html**.

Three months later, the second Wrinkle coincided with the 1998 Equinox. Various minor Wrinkles took place over the ensuing 21 months. These can be found at **www.realitysmith.com/wrinklebase.html**.

And so to Wrinkle 2000, shot between midnight December 31, 1999 and midnight January 1, 2000. Only pure QuickTime was allowed: QuickTime VR, QuickTime 4.0 streaming with a separate, accompanying QuickTime sound file, no Java-based items, and a maximum file size of 500KB. This Create concentrates on three of those panoramas that, along with a further five, can be found in the Cool Extras folder on this month's CD. The full set can be seen at **www.hotspots.hawaii.com/wrinkleintime/**.

Thanks go to the Wrinklemeister Robert 'Rabbett' Abbett, to Kathy Wheeler and to all the panographers who took part.

A CD containing all Wrinkle 2000 panoramas, many at a higher resolution than those on the Web site, is available from **hotspots.hawaii.com/irhpages/ store/wrinklecd.html** for $30 (Mac only) or $35 (Mac/PC hybrid). **MW**

**Vic Lennard is *Macworld's* CD editor.**

GEORGINA WATSON
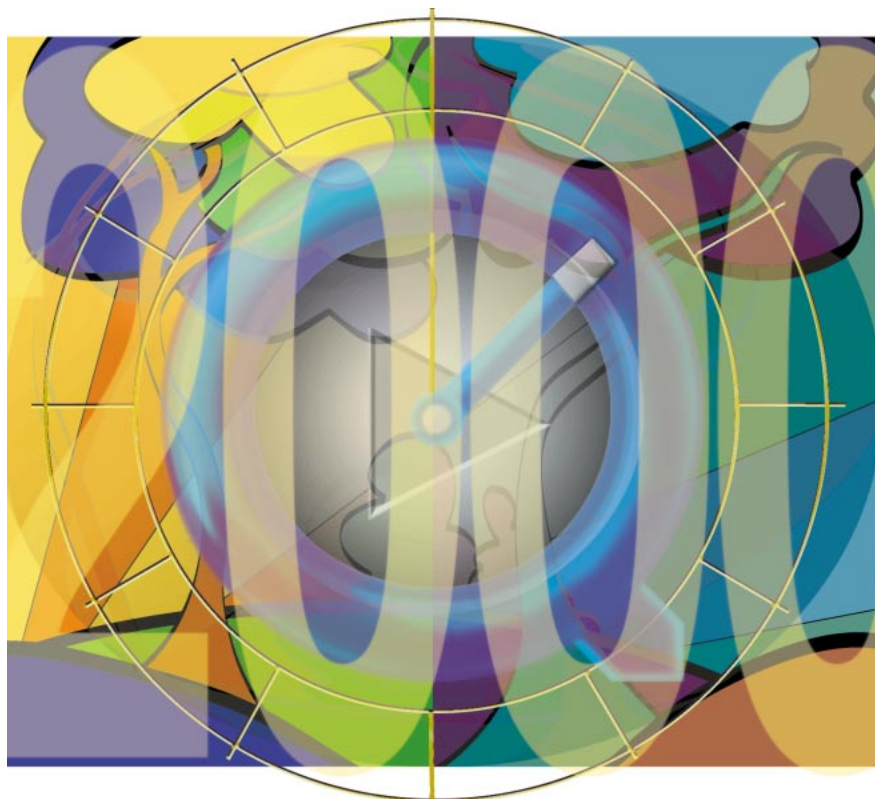




***Foxed***
*Mt Kosciusko, Australia's highest mountain at 2,228m, was the scene for Richard Fox's panorama.*



***City scape***
*Robert Serra's movie is part of a QuickTime VR exhibition with more than 50 New York City panoramas. It will be released around April 2000.*

## Irene Blueth: Cortes Island, British Columboa, Canada



Cortes Island is on the west coast of Canada, about 100 miles north of Vancouver. On the beach, Blueth shot some close-ups of a leaf, the texture of the driftwood, and the little pools. She added the leaf close-up into the pano to communicate the experience of being surrounded by nature. Additionally, Chai Duncan – also of Cortes Island – improvised two songs. As you pan around, you hear the songs overlap and change.

Photographs were taken with a handheld Fuji MX-700 digital camera in vertical format, to get a wider field of view. The lens is not very wide-angled, the equivalent of about 38mm on a 35mm camera.

When Blueth faced into the sun, she shielded the glare with her hand, but still got some lens flare. The camera's lower resolution was used – 640-x-480 pixels, high-quality JPG – stitching the higher resolution photos is difficult and slow on a 233MHz PowerBook G3 with 96MB of RAM.

For the music, Chai's eight-track mixer was plugged into the microphone jack on the PowerBook G3, and tracks were mixed in real time using SoundEffects. Each of the two soundfiles was about 3MB uncompressed, but QTPlayerPro's QDesign brought them down to around 80K each.
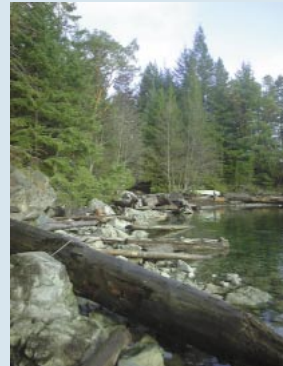


*Blueth took a series of 15 pictures of Cortes Island to produce the QuickTime VR movie, a few of them are pictured above. She then stitched them together using the software listed below left.*



**Leaf it out**
*This close-up shot of the leaf was used as a feature within the movie.*

### What she used

■ Cameraid to check and rotate photos.
■ Photoshop to make minor colour adjustments.
■ PhotoVista to stitch the images. Used in the non-automatic mode, and long strip saved as a PICT.
■ VRL (freeware; www.marink.com/Products/VRL) to add hotspots, spin into QTVR panorama and compress PICT into a small JPG for the Web.
■ ConVRter Pro (www.vrtools.com) to convert VRL's QTVR Version 1 pano to Version 2.
■ Apple QuickTime Player Pro to add the close-up of the leaf. Use Movie – Get Info – Controller and change to Movie Controller, then add other tracks and change back to QTVR controller when finished. QuickTime Player Pro was also used to compress the soundtrack with QDesign.
■ VRHotWires (www.mountain-inter.net/~bmeikle/) to make the leaf appear when you click on the hotspot, and disappear when you pan away from it.
■ SoundsaVR (www.smgvr.com) to add the two soundtracks, loop them and make each one fade as you pan away from it.

## Gary Alexander: Near Piccadilly, London

London played host to the usual New Year's Day street parade, and Alexander captured the essence of this from a side street next to The Ritz hotel.

Panos with lots of people are hard; if a person moves off and is on the edge of the frame, the other part of them is missing from the next photo. The shots Alexander used were taken within a half-hour period around 2.15pm. On reducing the 41 pictures down to 13, there was some duplication so he combined the parts he liked. The boy in the foreground wasn't actually there when the inflatable was behind him – he was in that same spot but not at the same time. Also, if Alexander saw an interesting picture, like the person taking the photo, he whipped around and shot it.



**On parade**
*Alexander took 13 pictures for his movie. The people in the pictures made stitching more difficult.*

### What he used

■ Fuji MX-2900 camera was used on its fine setting (1,800-x-1,200 pixel JPG, approx 800K each).
■ Sound was recorded on a Sony MiniDisk MZ-R50.
■ Having lost his (homemade) jig, Alexander used a friend's tripod head, which didn't quite work, but was better than nothing. Without indents for the rotation positions, he hurriedly divided up a piece of masking tape and judged the positions by eye – but realized afterwards that he'd shot 13 positions instead of 12.
■ Because of the dubious tripod head arrangement, Alexander had to do a lot of extra work in Photoshop to get everything aligned.
■ An initial attempt in Roundabout Logic's Nodester was exported as a PICT.
■ He then cleaned up the picture in Photoshop, fixing the parts that didn't align well.
■ The resulting PICT went back to Nodester for outputting as a QTVR movie, that was finally re-saved from MoviePlayer for QuickTime 4 streaming.

## Terence Hogben: Giant's Castle, Kwazulu Natal, South Africa



Shot on the foothills of the Drakensberg mountains, a scene of utter tranquillity, as far removed from the Millennium celerbrations as one can get. The two young men were off to a local Roman Catholic church, but, unfortunately, Hogben never found the church afterwards. Now that would have been a panorama.



**Praise the Lord**
*Hogben only took four pictures for his movie, he then stitched them together using applications including Photoshop and and PTStitcher.*

### What he used

■ Using a 16mm fisheye lens, Hogben shot four photos on 35mm colour negative film.
■ He then scanned them on a Nikon LS2000 slide scanner.
■ The scans were dewarped – fisheye-corrected – in PTStitcher, at the same time producing a multi-layered Photoshop file with masks for each layer.
■ The images were manually stitched on a beige 266MHz G3, producing a 20MB file. Terence has found that automatic stitching battles with people, and often causes misalignment with architecture as well. The advantage here is the use of superwide angles so reducing the number of images to four.
■ The file was reduced to around 6MB and taken into Apple QuickTime Authoring Studio to make the final pano.
■ Jon Summers' Convertor created the preview track, and a revolving track was added.
■ All media was finally rearranged in DeliVRator so that all data tracks were in the correct place. DeliVRator also simulates a Web connection allowing an author to see exactly how an end user will see the pano according to their connection.

# Apple to the rescue

Mac Help isn't just for beginners, it's a great reference tool.
**By Joseph Schorr**

You see it staring back at you from the menu bar every day, but do you actually use the Help menu – the Finder's door into the sprawling Mac Help Center and its hundreds of articles on the Mac OS, QuickTime, AppleScript, and other Mac technologies? If you're like most hard-core Mac devotees, you tend to avoid the Mac Help command – or the Mac OS Help command, as it was known before Mac OS 9. After all, isn't all that Help stuff for beginners – the folks who still don't know how to create new folders, or where to put their fonts?

True, a lot of Mac Help is devoted to the basics, but within that network of hyperlinked pages are also some valuable reference tools, little-known shortcuts, and even scripts and commands that you can't find anywhere else. Here are some secrets to help you mine Mac Help, whether you're an absolute beginner or an expert user.

## Browser power

Ever try copying a particularly valuable Mac Help entry in order to paste it into another document, so you can refer to it later? You can't do it. You can print a Mac Help screen, but it's impossible to select or copy it.

Not to worry. Those Help entries are nothing more than HTML pages, and Apple Help Viewer – the small application that displays the files – is really just a very simple, stripped-down Web browser. This means you can open any Mac Help entry using a real Web browser, such as Netscape Navigator or Microsoft Internet Explorer, then select, copy, and paste to your heart's content.

Simply launch your browser, choose either the Open File command from the File menu in Explorer, or the Open Page In Navigator command in Netscape, and go to the Help files. You'll find them in the Help folder inside the System Folder. Open the Help Center file to display the Mac Help start page. Now you can click on any link in the Mac Help table of contents to open

## Improve your Mac OS search results

Watch out – you can't use plain-English Boolean operators, such as AND or NOT, to search Mac Help. Instead, you must use Mac Help's own search characters. You have to type the plus sign (+) rather than AND and the vertical bar character (|) in place of OR. To exclude a particular word from a search, you must type an exclamation point (!) instead of not.

For example, suppose you want to get details about using Mac OS 9's Voiceprint Password feature. If you search Mac Help for voice AND password, you'll end up with five pages of search results, including irrelevant articles such as "Hearing Spoken Alerts" and "Changing the Volume." But type voice + password, and you'll get just one page of results, with four relevant articles explaining this feature.

One more tip: You can further refine your searches by using parentheses to group search expressions. For example, typing (folder + icons) ! AppleScript searches for Help files that contain the words folder and icons but not the word AppleScript.
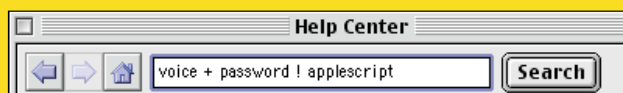
**The right words**
*Improve the accuracy of your searches by using the correct Boolean search characters.*

ANDY BAKER

## Mouse maintenance

**When your mouse gets as balky as a donkey, you know it's time to clean the gunk out of it.** Albert Wittlesey, suggests cleaning the rollers with a 3- or 4-inch piece of ordinary transparent tape, cut in half lengthwise – because that's how wide the rollers are. First, open up your mouse and remove the roller ball. Poke one end of the tape into the mouse and press it against a roller with one finger while pulling the other end of the tape up with the other hand. The tape contacts the whole surface of the roller, picking up gunk and lint. You can also clean the mouse pad by pressing tape all over it, removing the dirt that causes a mouse to slide rather than roll.

If the tape doesn't get your mouse clean, try the old standby – washing cruddy rollers with an alcohol-moistened cotton swab, and picking out lint with tweezers. Washing with warm water and mild soap – no abrasives – and drying with a lint-free towel also works. If that doesn't get your mouse working smoothly, maybe the slider pads on the bottom of the mouse have worn thin, making the mouse ball ride too high and occasionally miss the rollers inside the mouse. You can fix this problem with transparent tape – two layers of tape applied over the worn pads.

## Network Mac and Windows

**What's the easiest way to connect a PC to a LocalTalk network? Specifically, I have a Quadra 605, a Power Mac 7200, and a LaserWriter IINTJ connected in a** LocalTalk network. I need to exchange files between the Power Mac and a NexTrend NexStar PC, connected to a Canon C5500 printer. I may also need to print to the LaserWriter from the PC.
*Orval Hollingsworth*

You could snake a serial cable between one of the Macs and the PC and transfer files using communications programs on each computer, but I recommend forking out the extra dough and setting up a small network. Besides being a much more versatile option, a network will quickly pay for itself in saved time and frustration. You can set up an ethernet network between the Power Macintosh and the PC, and then bridge that network to your existing LocalTalk network.

Here's how you do it. First, install a 10BaseT ethernet adaptor in the PC, and place a small 10BaseT hub in a convenient location between the PC and the Power Mac. Run a 10BaseT cable from each of these computers to the hub. Then connect the LocalTalk network – the Macs and the printer – to the ethernet network (the PC and the Power Mac) by running Apple's free LocalTalk Bridge software (**http://asu.info.apple.com/swupdates.nsf/artnum/n11358**) on the Power Mac.

For more speed on the Power Mac, forget this software and instead run another 10BaseT patch cable from the hub to a freestanding ethernet-to-LocalTalk adaptor, such as Farallon's (**www.farallon.com**) £93 (excluding VAT) EtherMac iPrint LT. Run a telephone cable from this adaptor to a LocalTalk connector box (PhoneNet-style) at the Quadra or the printer. Then disconnect the Power Mac from the LocalTalk network. For more speed on the Quadra, install an ethernet adaptor in it, run a cable from it to the hub, and disconnect it from the LocalTalk network.

To share both your files and the LaserWriter between the Macs and the PC, install Miramar Systems' (**www.miramarsys.com**) £189 PC MacLAN (Computers Unlimited, 0181 358 5857) software on the PC. This software will also let you share the PC's printer with the Macs, but each Mac must have the driver software for the particular PC printer model – the Canon C5500, in this case – installed in order to use the printer. Mac drivers for PC printers are hard to find, but PowerPrint, £62 from Infowave (Computer 2000, 01256 463 344), contains drivers that are compatible with over a thousand PC printers.

## Anticipate caps

**To know if the caps lock function on my G3 PowerBook is turned on, I must look down at it – a tiny green light indicates it's activated.** All too often I inadvertently type in CAPS. Is there any shareware that adds a visual to the menu bar?
*Michael F. Murphy*

CapsOff, a $10 shareware utility from Redpoint Software (**www.redpointsoftware.co.uk/pages/redpoint/capsoff.html**), does that and more.

## Zip to the end or beginning

**Sometimes I need to get quickly to the end or the beginning of a block of text in QuarkXPress. To get to the end, I press ⌘-A to** select all, and then I press the right-arrow key. To get to the beginning, I select all and press the left-arrow key.
*Randy Oest*

You can use this technique in other applications if the home and end keys don't work, or your keyboard doesn't have them.

## Make a bookmarks homepage

**To keep your Netscape bookmarks easily accessible, make them your home page. Set this up by choosing Preferences** from Netscape's Edit menu and clicking the Choose Local File button in the Navigator section of the Preferences dialogue box. In the Open dialogue box that appears, open the System Folder, the Preferences folder, the Netscape Users folder, and the folder that bears your Netscape user name. Finally, select the Bookmarks.html file. If you don't see a Netscape Users folder, open the Netscape ƒ folder and choose the Bookmarks.html file inside it.

After you choose Bookmarks.html, its URL appears in the Home Page Location field. Your bookmarks will appear in the browser whenever you click the Home button or open a new browser window.
*Vasily Koroslev*

## Fix AppleWorks import trouble

**When you're trying to import a document to or from AppleWorks, or ClarisWorks, you may experience a problem – the** application reports that it could not find necessary translation software, or you have fewer file-format choic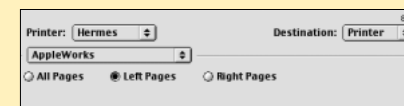es than you expected. But when you look in the Claris Translators folder – inside the Claris folder within the System Folder – the translator files are all right there. This problem usually occurs after you copy all your files to a new computer or a new hard drive and then use AppleWorks or ClarisWorks from the new hardware.

The solution is to open the Claris Translators folder, select all files in it (⌘-A), and drag them to the desktop. They'll spread all over the desktop but will remain selected as long as you don't click the mouse or press any keys. Next, simply drag the files back into the Claris Translators folder and close the open windows. Strangely enough, after dragging the files back into the very folder you dragged them out of, you should be able to import and export files in AppleWorks, or ClarisWorks, using these translators.
*Martin Kaufmann*

To minimize problems like these, when copying system, application, and alias files to a new computer or hard drive, give the destination the same name as the source.
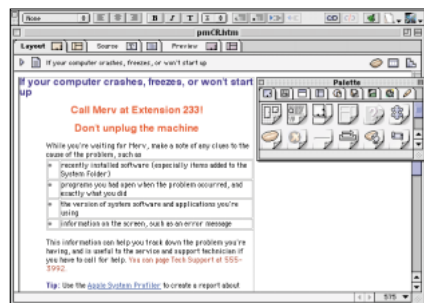
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a specific article. Unfortunately, you can't search for articles, as you can when using Apple Help Viewer. You can now select text and paste it into other applications, or save a Help file in text format for future reference.

Imagine being able to create a customized help system for all the users in your office, offering online help tailored to your workflow and procedures. You can do so easily – by modifying the Mac Help files. Because the Help files are HTML documents, you can add, delete, and modify their content by simply editing the files using a Web-authoring program such as Adobe GoLive or Macromedia Dreamweaver. Or, any text editor if you want to edit raw HTML code. You can, for example, embed your company's tech-support telephone number in the Help articles, letting users know who to call if they have a problem (see "Help yourself"). Or you can delete suggestions you'd rather not have users try on their own.

The challenge in performing such customization is finding the specific article you want to edit – the Help articles all have cryptic names such as msAdjst.htm and sgFmSet.htm. To find the one you want, open Mac Help using a Web browser, as outlined previously. Open the article you want to edit, then take a look at the Location bar in your Web browser. The file path displayed there will end with the name of the file you need to edit. Make a note of it, then open that file with your editing application, and you can put your own spin on Apple's help.

The Mac Help system offers more than information. Embedded within some Help pages are scripts that perform tasks otherwise unavailable on your Mac. You activate these scripts by clicking on them within Apple Help Viewer. To run embedded scripts from within Mac Help, you have to view pages from Apple Help Viewer, not via your Web browser. For example, the help article "Switching between Open Programs" contains scripts that anchor the Finder's Application Switcher palette to the bottom of your screen – a trick you can't perform from within the Finder. The same article contains another script that allows you to change the default keyboard shortcut (⌘-tab) used to switch between active programs.

In Mac OS 9, the AppleScript that automatically adds an alias of a selected item to the Apple menu is available through Mac Help. Just go to the Apple menu's Help page and click on the link under Adding And Removing Items In The Apple Menu.

When you perform a search using Mac Help, you may see a Broaden My Search link at the bottom of the results page. If you click on it, Apple Help Viewer will repeat your search, returning more results.

With a normal search, the search engine first looks for relevant articles only in the specific area of Help you happen to be using – QuickTime Help, AppleScript Help, and so on. When you activate Broaden My Search mode, the engine searches across all of the Mac Help areas simultaneously, often providing a wider range of articles on your topic. **MW**

**Joseph Schorr co-authored *Macworld Mac Secrets* (IDG Books Worldwide, 1998).**

**Help yourself**
*To customize a Help file, open it in an authoring program such as Adobe GoLive. Your modifications integrate seamlessly into the Help entry that Apple Help Viewer displays.*

*The legion of Apple obitury writers are eating their words.*

# Desktop critic

**DAVID POGUE** is the author of *iMac for Dummies* (IDG Books Worldwide, 1998) and the *Great Macintosh Easter Egg Hunt* (Berkely Books 1998). He also wrote *Macs for Dummies,* fifth edition, updated for Mac OS 8, *The Weird Wide Web* (IDG Books Worldwide, 1997) and *The Microsloth Joke Book* (Berkeley, 1997).

# Doomed merchants

A friend recently emailed me a collection of technology predictions. They included Popular Mechanics' declaration in 1949 that: "Computers in the future may weigh no more than 1.5 tons". Then there was the Western Union in 1876: "This so-called telephone has too many shortcomings to be seriously considered as a means of communication". And then there was Bill Gates on RAM in 1981: "640K ought to be enough for anybody." The moral is, if you think you can predict the future of technology, you're a fool.

Yet during Apple's business slump in the mid-1990s, an epidemic of Prediction Flu swept the world. Most journalists and analysts were content to report what was actually happening, which was dramatic enough. But the following dime-store Nostradamuses felt moved to tell their readers what was going to happen. The resulting self-fulfilling effect made it even harder for Apple to recover.

I lost a lot of faith in the media during those dark days. In fact, I started working on this column back then. "If Apple ever comes back," I vowed through clenched teeth, "I'm going to come back to haunt these guys. I'm going dig up and reprint every one of their doomy predictions so readers will never again take these fortune crackers seriously."

Apple did come back, so here I am. If you're a Mac fan, forgive this unpleasant flashback to a nightmarish time. It's for a good cause.

## The bad guys

■ *Time*, February 5, 1996: "One day Apple was a major tech company with assets to make any self-respecting techno-conglomerate salivate. The next day, Apple was a chaotic mess without a strategic vision and no future."

The company with "no future" has since tripled its market share and is raking in $12 billion a year. Bonus fact: The author, a venture capitalist, assesses companies' prospects for a living. Scary).

■ *The Boston Globe* May 14, 1998: "The new iMac might have done Apple a world of good if it had appeared a few years ago, when far fewer homes had PCs. Today, the iMac will only sell to some of the true believers. It's clean, elegant, floppy-free – and doomed."

You want doomed, buddy? Try your career as a psychic. Apple sold over two million iMacs in the machine's first year, making it the best-selling personal computer during most of its first 12 months.

■ Nathan Myhrvold, Microsoft chief technology officer, June 1997: "The NeXT purchase is too little too late. Apple is already dead."

Hey, Nath, if Apple's dead, then Microsoft is decomposing. The NeXT purchase was a masterstroke, landing Apple great people such as Avie Tevanian and Steve Jobs, as well as the software that underlies Mac OS X.

■ *Fortune*, February 19, 1996: "By the time you read this story, the quirky cult company will end its wild ride as an independent enterprise."

For a magazine called *Fortune*, it was pretty lousy at reading Apple's palm.

■ *Wired*, June 1997: "Admit it. You're out of the hardware game."

Good thing editors don't run companies – what actually saved Apple was hardware, hardware, and hardware.

■ *The Financial Times*, July 11, 1997: "Apple no longer plays a leading role in the $200 billion personal computer industry."

Just how many computer companies are rushing to make their computers look like Apple's? Dell, eOne, IBM, Gateway – that sure smells like a "leading role" to me.

## The good guys

While I'm ordering the plaques for the Tech Journalism Hall of Shame, I hasten to mention that some people made better stabs at predicting the future.

In the thick of Apple's hard times, for example, Prince Walid of Saudi Arabia bought five per cent of Apple, telling the *New York Times* that the company "is selling $8 billion worth of goods even in the midst of the confusion. This is a heck of a company."

The most surprisingly clearheaded analysis of all, though, came from none other than Bill Gates in 1996. He said that Apple wasn't doomed, Apple just needed to "pick its markets and renew the innovation in the Macintosh."

And that, of course, is exactly how Steve Jobs saved Apple. He focused on specific markets, renewed innovation – and ignored the media. **MW**